



**MACTECH
USS CLAMSHELL
PORTABLE LATHES
SETUP AND OPERATION
MANUAL**

Model	USS CLAMSHELL
Description	Lightweight Portable Clamshell Lathe
Part Number	605-0367C, 605-0418C, 605-2758C, 605-2759C, 605-2790C, 605-2770C, 605-2798C
Manual Document Number	900-0013
Manual Revision	Rev D

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Revision History			
Revision Level	ECO No.	Description	Date
A		Release	04/22/2015
B			03/16/2018
C	465	Update drawing package	07/30/2018
D		Updated Drawings, Safety, and Cover page	04/29/2019



Mactech, Inc. • 4079 Pepin Ave. • Red Wing, MN 55066
PH: 651-388-7117 • TOLL FREE: 800-328-1488 • FAX: 651-388-0337
www.mactechonsite.com

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Safety Keywords

The safety keywords DANGER, WARNING, and CAUTION used in this manual indicate the level of hazard that may be encountered by the user. These keywords appear in a box with the hazardous condition or operation throughout this manual. The definitions of these safety keywords are:

	DANGER : Indicates death or serious injury will occur if precautions are not taken.
	WARNING : Indicates death, serious injury, or property damage can occur if precautions are not taken.
	CAUTION : Indicates injury or property damage may occur if precautions are not taken.

Safety

Safety is an essential part of the operation of this equipment. Heed all warnings in this manual and markings on the machine to avoid hazardous and unsafe operation. Always observe site safety rules and safety information provided to the user of this equipment. Use personal protective equipment including gloves, safety glasses and steel-toe boots when using this equipment.

	DANGER : This machine includes moving and rotating components. Keep clear of the machine while in operation. Failure to heed this warning can result in serious injury or death.
	WARNING : Perform a JSEA (Job Safety Environmental Analysis) before using this equipment. Always be aware of your surroundings. Failure to analyze site specific hazards can result in serious injury or death.
	WARNING : Users must read and understand these instructions before operating this equipment. Failure to comply with these instructions can result in death, serious injury, or damage to the equipment.
	WARNING : Do not exceed the maximum hydraulic flow or pressure specified for this equipment. Failure to heed this warning may result in serious injury.
	WARNING : Skin injection hazard. Do not check for hydraulic leaks with your hands. Do not hold hydraulic hose or connectors while the hydraulic system is pressurized. Always shut off and de-pressurize the hydraulic system before servicing the unit. Hydraulic fluid under pressure can easily puncture skin, causing serious injury or death.
	CAUTION : Valves and other hydraulic components may be hot during and after operation. Allow the equipment to cool before handling, or use heat-resistant gloves. Hot surfaces may cause serious burns.
	CAUTION : This machine has clamping functions and moving components that create pinch points. Be aware of all pinch points, and hand and body position while setting up, rigging, and operating the machine.

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Table of Contents

Section 1 - Description	1-1
Components	1-1
Dimensions	1-2
Capabilities	1-3
Tooling	1-3
Drives	1-3
Optional Equipment	1-4
Drive Configurations	1-5
Section 2 - Setup	2-1
Install Lock Pins	2-1
Separate Clamshell Halves	2-2
Install Locator Extensions	2-3
Install Clamshell on Workpiece	2-4
Square and Center the Clamshell	2-5
Adjust Feed Mechanism	2-6
Install Tool Bits	2-8
Set Leading/Following Tool Bits	2-13
Install Drive Motor	2-14
Section 3 - Operation	3-1
Sever In-line Pipe	3-1
Sever/Bevel In-line Pipe	3-1
Gibs Adjustment	3-2
Section 4 - Cleaning, Inspection and Maintenance	4-1
Section 5 - Assembly Drawings	5-1



Mactech, Inc. • 4079 Pepin Ave. • Red Wing, MN 55066
PH: 651-388-7117 • TOLL FREE: 800-328-1488 • FAX: 651-388-0337
www.mactechonsite.com

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Section 1 - Description

Mactech USS Clamshell Lathes are exceptionally lightweight, yet rigid, portable machines that are capable of precise pipe cutting and machining. Cold-cutting operation allows the clamshell lathe to be used in environments where sparking is not allowed. The clamshell opens at the split frame and the machine is placed around the workpiece at the location of the cut. Multiple locators are used to center the machine on the workpiece. The drive system rotates the tool blocks, and the feed pins advance the tool bits into the workpiece. USS Clamshell Lathes also provide a platform for optional equipment, such as counterbore and single point face machining attachments.

CAUTION: Users must read and understand these instructions before operating this equipment. Failure to comply with these instructions could result in personal injury, damage to the equipment, or voiding of the warranty.

CAUTION: Keep away from moving parts. Do not reach into moving machinery. Keep the work area clear of non-essential personnel and materials. Always turn off power before adjusting the machine or clearing material. Always use appropriate personal protective equipment. Always follow all site safety procedures and regulations.

NOTE: Before each use thoroughly inspect the machine. Check for loose or missing fasteners. Make sure all guards are in place and securely fastened. Make sure the tool bit is sharp and in good condition. Correct any problems that require maintenance or replacement before using the machine.

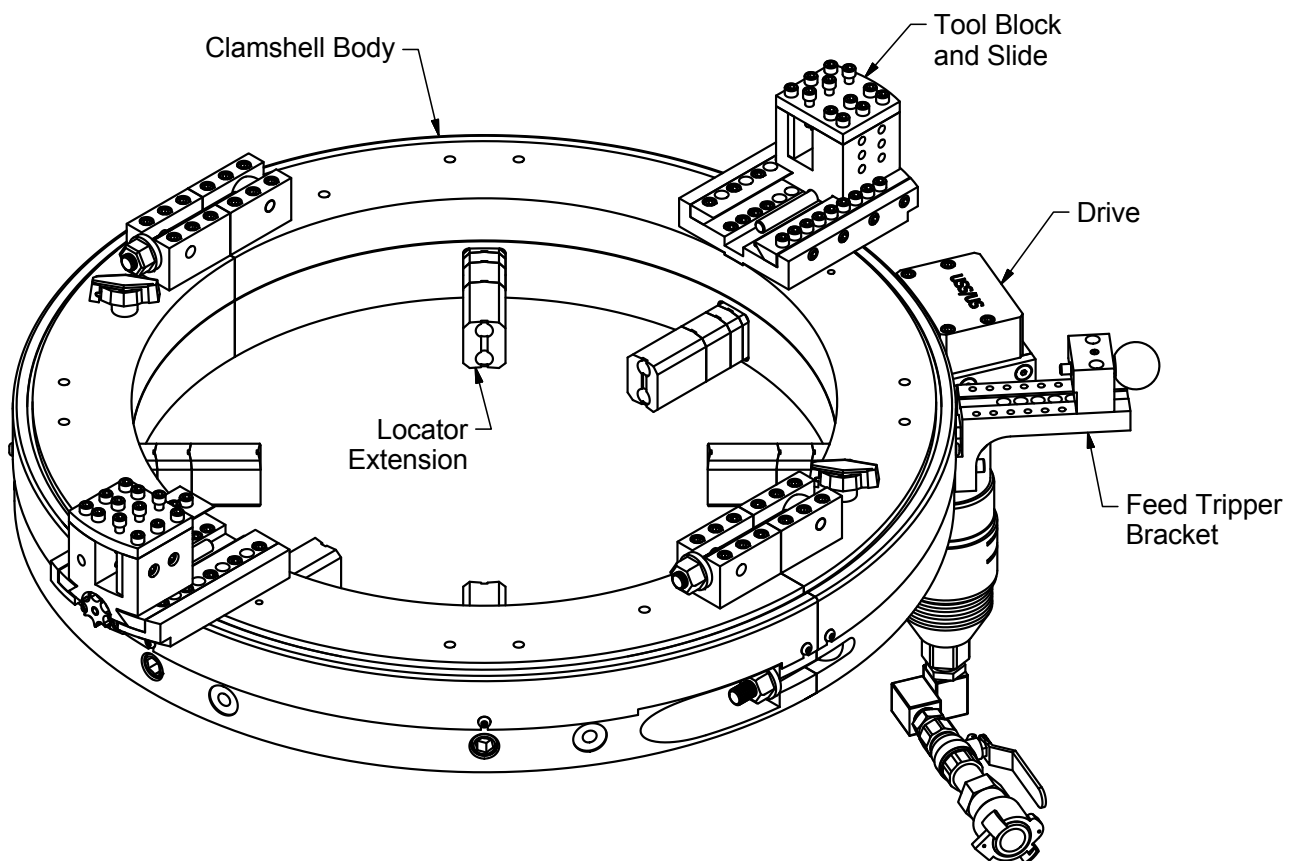
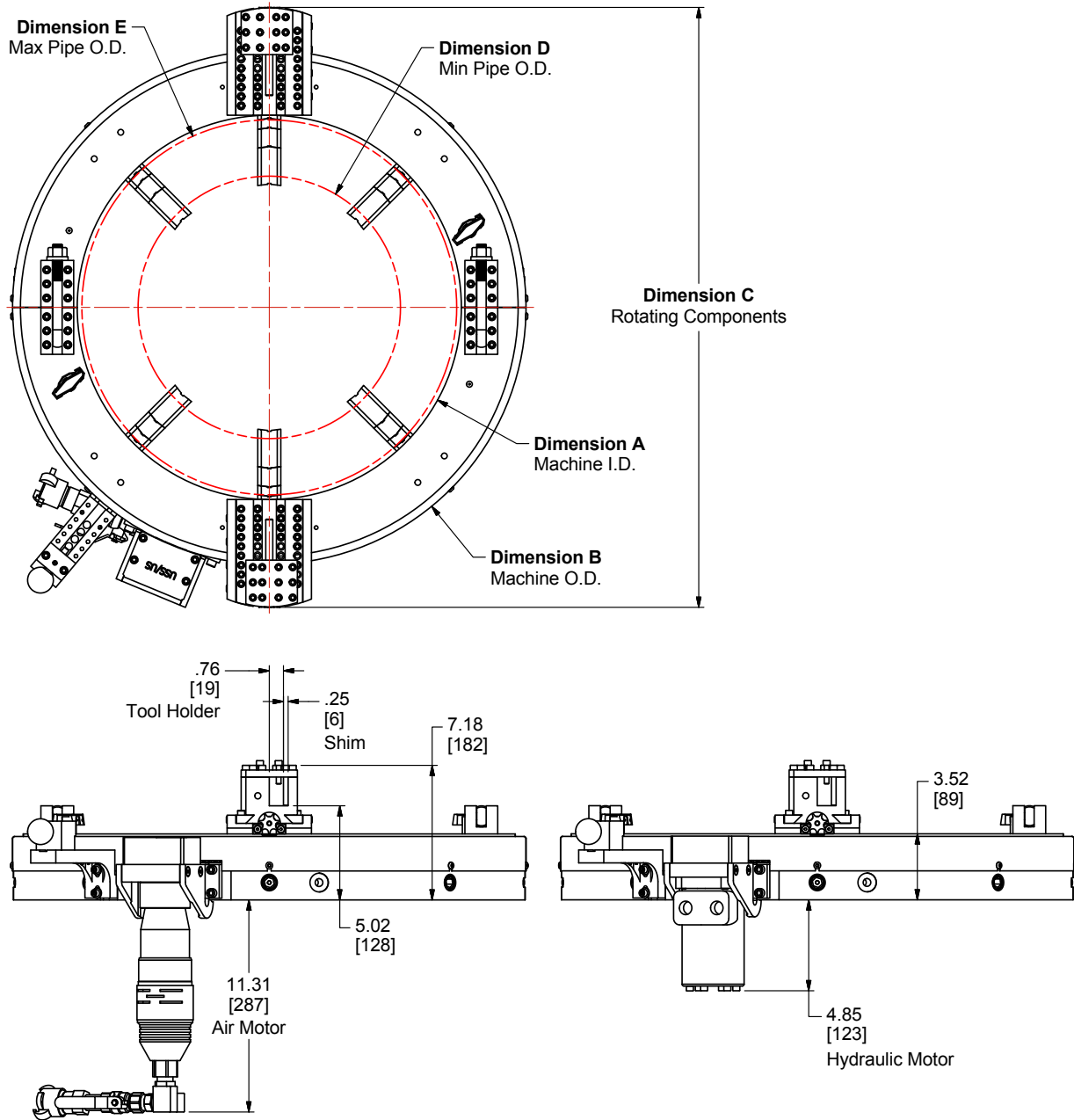


Figure 1-1 – USS Clamshell Portable Lathe Components

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS



USS Clamshell Portable Lathe Machine and Operating Dimensions

Dimension	816USS	820USS	824USS	828USS	830USS	832USS	836USS
A - Machine I.D.	16.50 (419 mm)	20.50 (521 mm)	24.50 (622 mm)	28.50 (724 mm)	30.50 (775 mm)	33.00 (838 mm)	37.00 (940 mm)
B - Machine O.D.	23.40 (594 mm)	27.40 (696 mm)	31.40 (797 mm)	35.40 (899 mm)	37.50 (952 mm)	40.00 (1016 mm)	44.00 (1117 mm)
C - Rotating Components	28.00 (711 mm)	32.00 (813 mm)	36.00 (914 mm)	40.00 (1016 mm)	42.00 (1067 mm)	44.50 (1130 mm)	48.50 (1232 mm)
D - Minimum Pipe O.D.	10.00 (254 mm)	14.00 (356 mm)	18.00 (457 mm)	22.00 (559 mm)	24.00 (610 mm)	26.00 (660 mm)	30.00 (762 mm)
E - Maximum Pipe O.D.	16.00 (406 mm)	20.00 (508 mm)	24.00 (610 mm)	28.00 (711 mm)	30.00 (762 mm)	32.00 (813 mm)	36.00 (914 mm)

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Capabilities

- Pipe Sever
- Pipe sever and bevel
- Pipe sever and double bevel

The USS series of Clamshell Lathes is capable of cold-cutting steel and steel-alloys, stainless steel, and most other metal alloys.

Tooling

3/4 or 1 inch tooling of various profiles.

Drives

Air Drive

Air supply requirement: 100 cfm @ 100 psi (2.8 m³/min @ 6.9 bar)

Hydraulic Drive

HPU requirement: 10-15 gpm @ 1000 psi continuous pressure (38-57 lpm @ 69 bar). Hydraulic motors include hose whips and quick-disconnects. Hydraulic power units are available from Mactech.

Optional Equipment

Refer to the following page for a selection of the optional equipment available for the USS series of clamshell lathes.

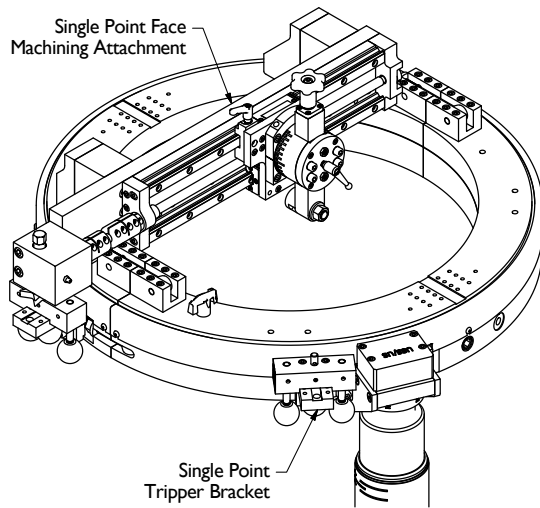
NOTE: Refer to the USS Clamshell Lathes Specification Sheets for detailed information on specific clamshell models.



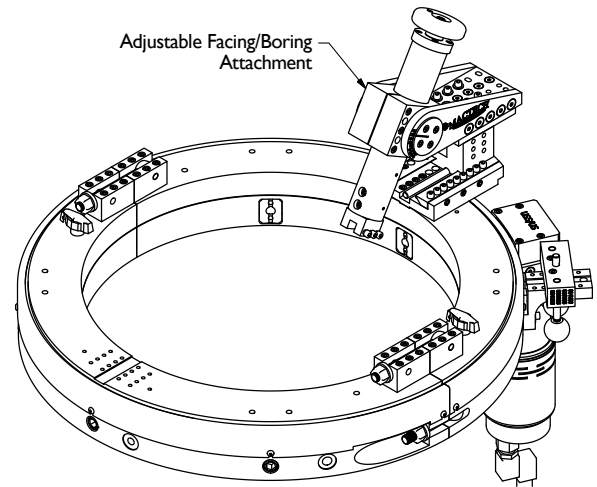
Figure 1-2 – Hydraulic Power Unit

USS CLAMSHELL PORTABLE LATHES

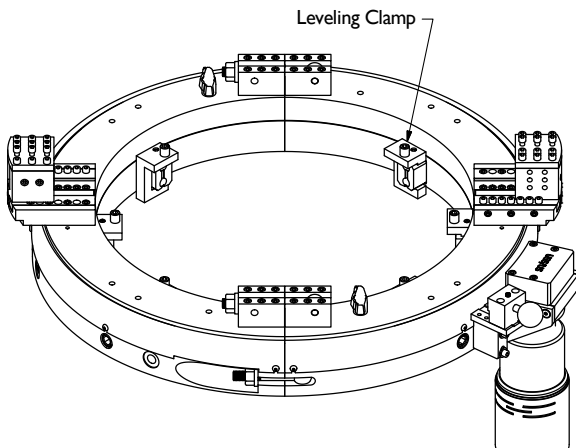
MACTECH PORTABLE MACHINING SOLUTIONS



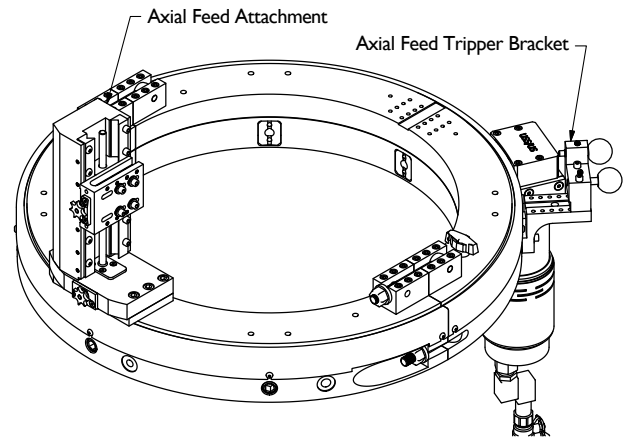
Single Point Attachment
Heavy-wall weld preps, Flange facing,
O-ring grooves



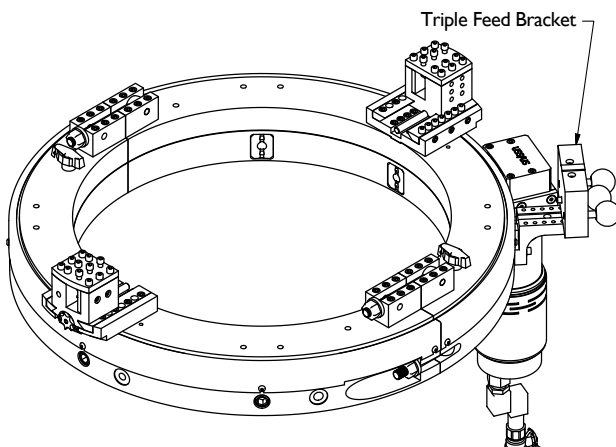
Adjustable Facing/Boring Attachment
Boring, Flange facing, RTJ grooves,
O-ring grooves



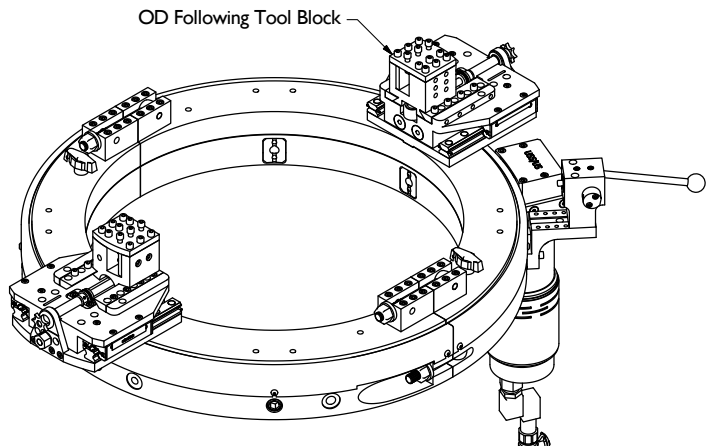
Leveling Clamps
Levels the clamshell with the workpiece face



Axial Feed Attachment
Axial machining (along length of pipe),
Shaft machining, Groove machining



Triple Feed Bracket
Tool bit feed rate adjustment, Feed direction
reversal

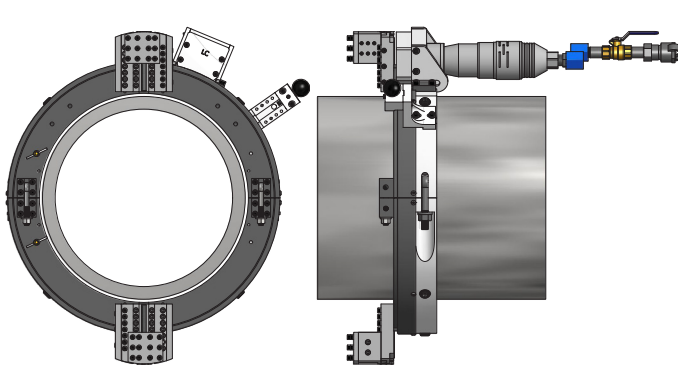


OD Following Tool Blocks
Tracks contour of the workpiece

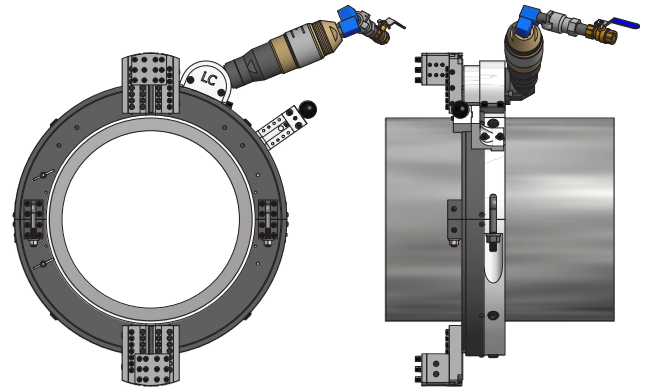
Figure 1-3 – Optional Equipment

USS CLAMSHELL PORTABLE LATHES

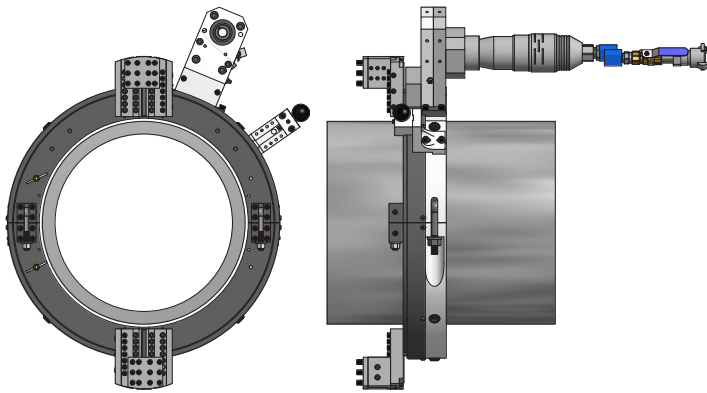
MACTECH PORTABLE MACHINING SOLUTIONS



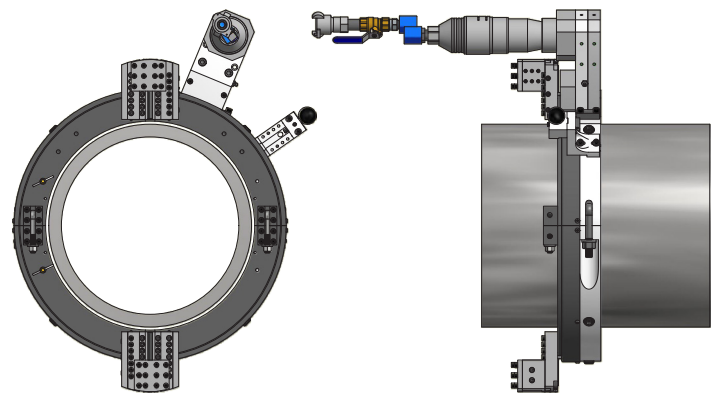
In-line Drive



Right Angle Drive



Reversible Drive, Motor Rear



Reversible Drive, Motor Front

Figure 1-4 – Drive Configurations

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Section 2 - Setup

CAUTION: The lock pins must be installed in the clamshell frame while performing the setup procedure. The lock pins prevent the gears from rolling out of the frame when the clamshell is separated. The clamshell gears are heavy, and can cause serious injury to the user or damage to the equipment if rolled out of the frame.

1. Rotate the clamshell gear to align the gear and housing split lines. Lock the gear and housing in place by inserting two lock pins through the holes on the face of the clamshell. If the gear holes do not line up with the housing holes, rotate the gear 180°. See Figure 2-1.

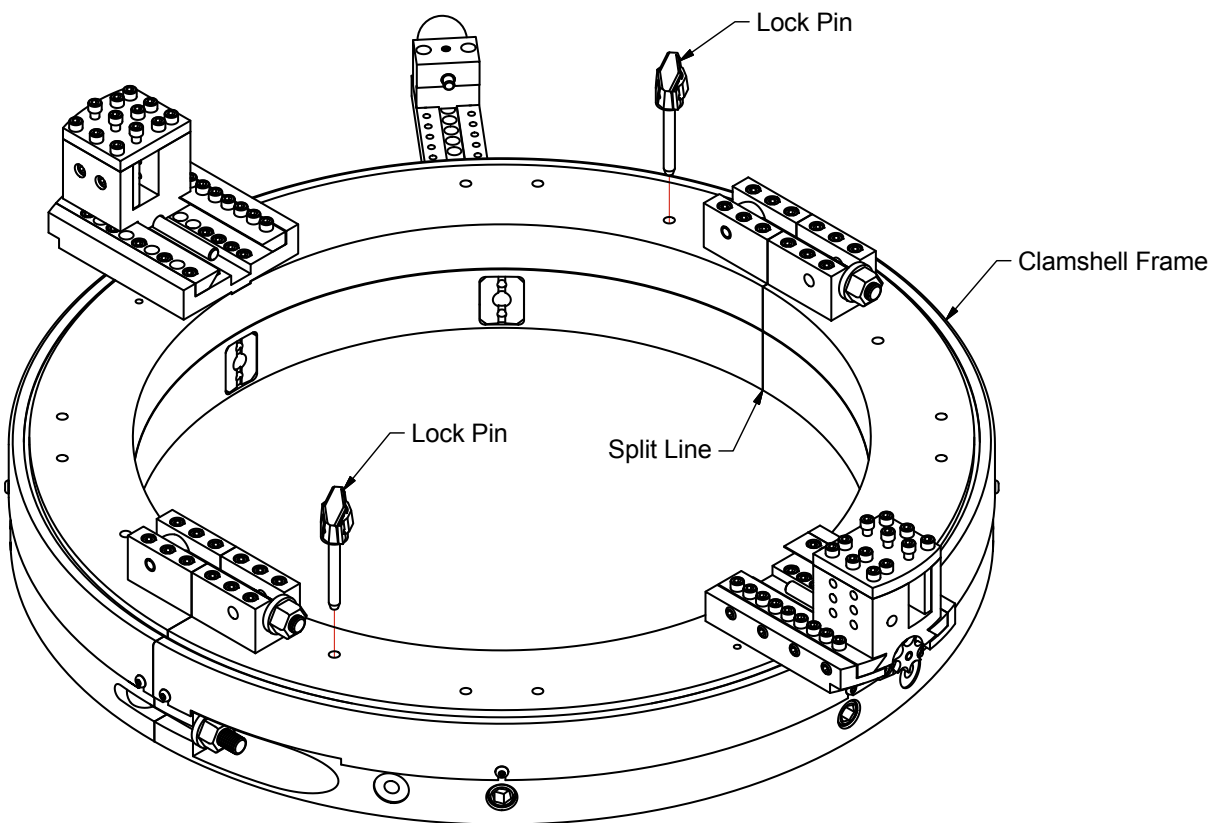


Figure 2-1 – Install Lock Pins

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Separate Clamshell Halves

2. Remove the nuts holding the four swing bolts. Separate the two clamshell frame halves by pulling straight apart. Do not pry or force open with tools. See Figure 2-2.

NOTE: Do not use tools to open the clamshell halves. Do not pry or force the halves open. Any attempt to do so may damage the equipment.

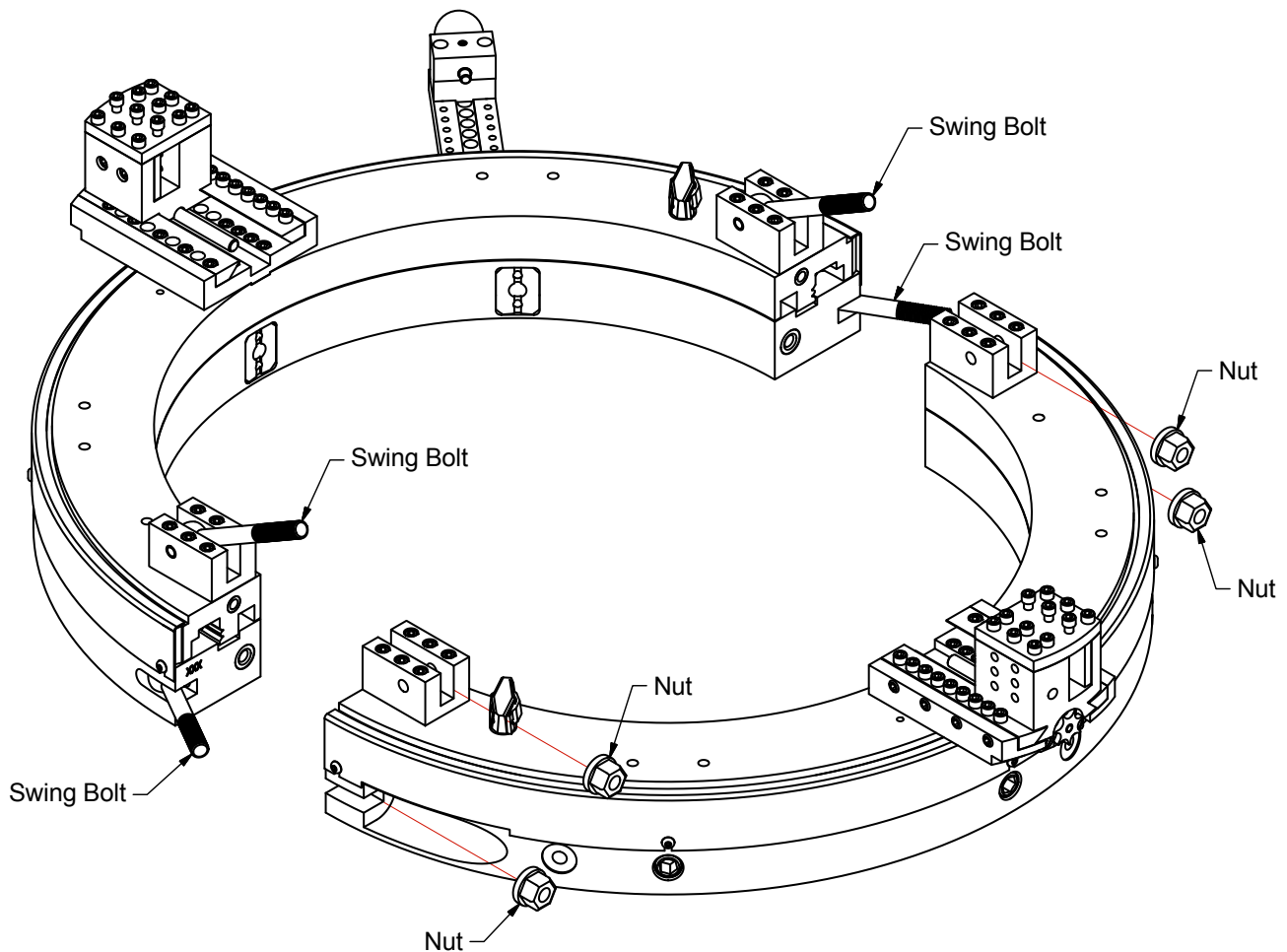


Figure 2-2 – Separate Clamshell Halves

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Install Locator Extensions

3. Determine the pipe or workpiece diameter. Select the size and combination of locator extensions required to fit around the diameter of the workpiece. Locator adjustment is done by turning the set screws on the outside of the clamshell housing. Back the locators out slightly so that they will clear the workpiece diameter when the clamshell is placed around the workpiece. See Figure 2-3.

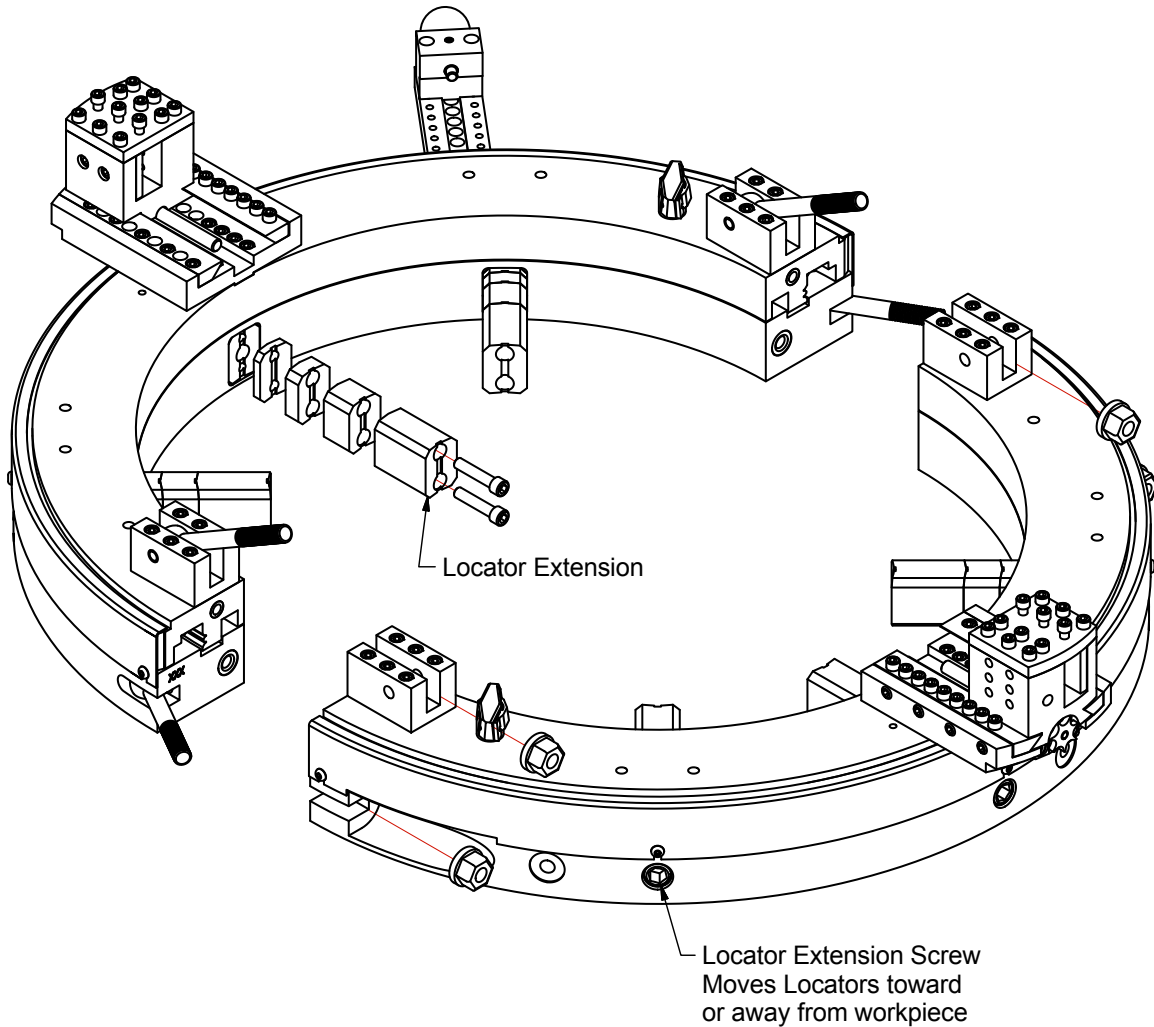


Figure 2-3 – Install Locator Extensions

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Install Clamshell on Workpiece

4. Place the clamshell halves around the workpiece. Close the clamshell by tightening the four swing bolt nuts. Tighten the locators against the workpiece. Final tightening will be completed after the clamshell is centered and squared to the workpiece. See Figure 2-4.

NOTE: Do not force the clamshell halves together. If the clamshell does not completely close around the workpiece, check the locators and extensions for proper size. It may be necessary to back the locators further away from the workpiece.

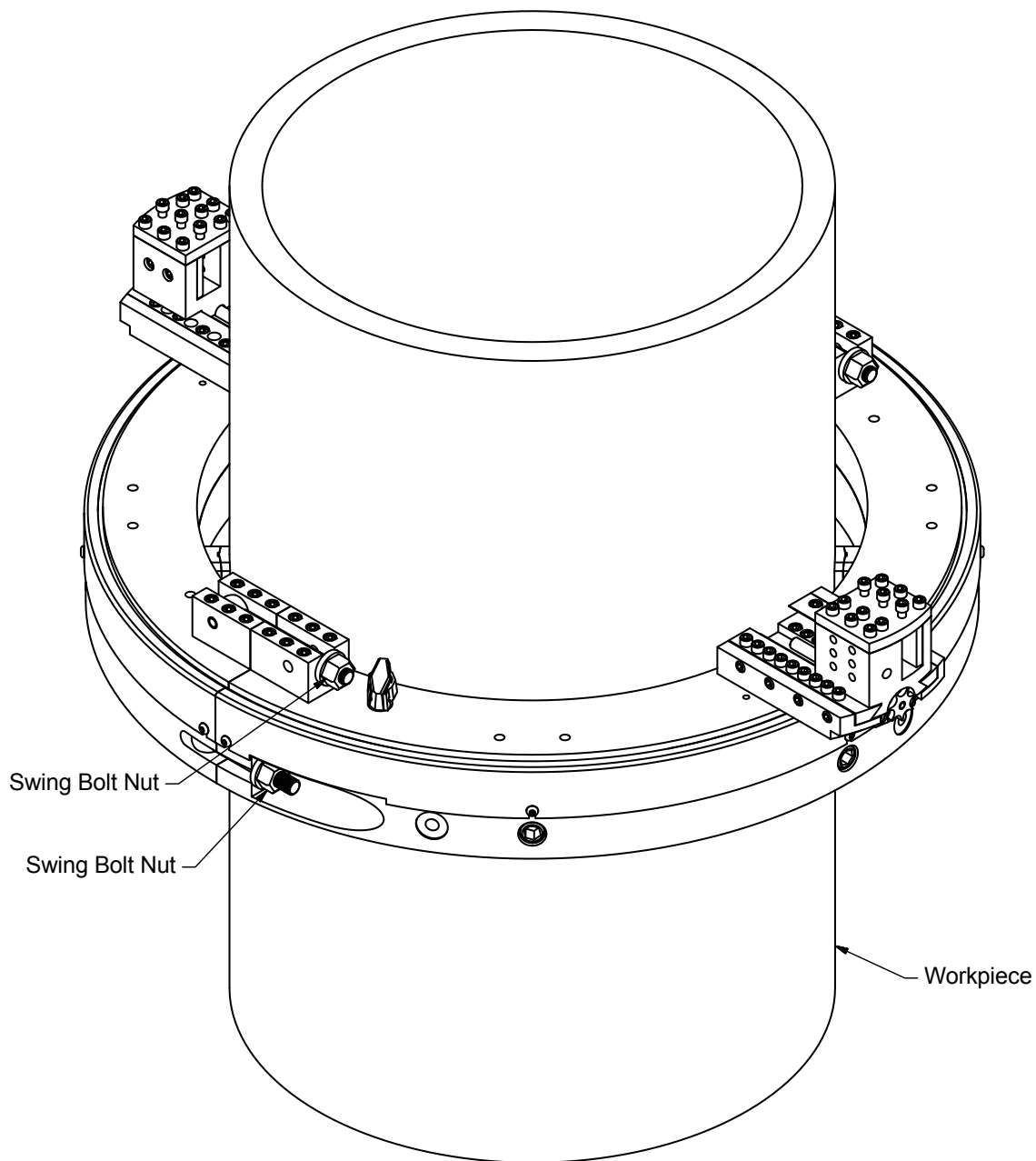


Figure 2-4 – Install Clamshell on Workpiece

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Square and Center the Clamshell

5. Square the clamshell to the workpiece. Place a square against the back face of the clamshell and along the length of the workpiece. Adjust locators 1, 4 and 3,6 until the clamshell is square to the workpiece. Always make adjustments in a cross-pattern sequence. See Figure 2-5.

NOTE: Always leave two locators, opposite of each other, tightened against the workpiece. This holds the clamshell and allows adjustment of the remaining locators. Always use a cross-pattern sequence when adjusting the locators.

6. Center the clamshell in the workpiece. Measure the distance from the workpiece outside diameter to the clamshell inside diameter at locator positions 1 and 4. Adjust the locators so that they are at the same dimension, while maintaining squareness and a secure fit on the workpiece. Repeat the process on locators 3 and 6. When the clamshell is centered and squared on the workpiece, tighten locators 2 and 5 against the workpiece. For fine centering, place a dial indicator on the clamshell face and indicate to the outside diameter of the workpiece. Make adjustments as required. Make sure all locators are firmly tightened against the workpiece. See Figure 2-5.

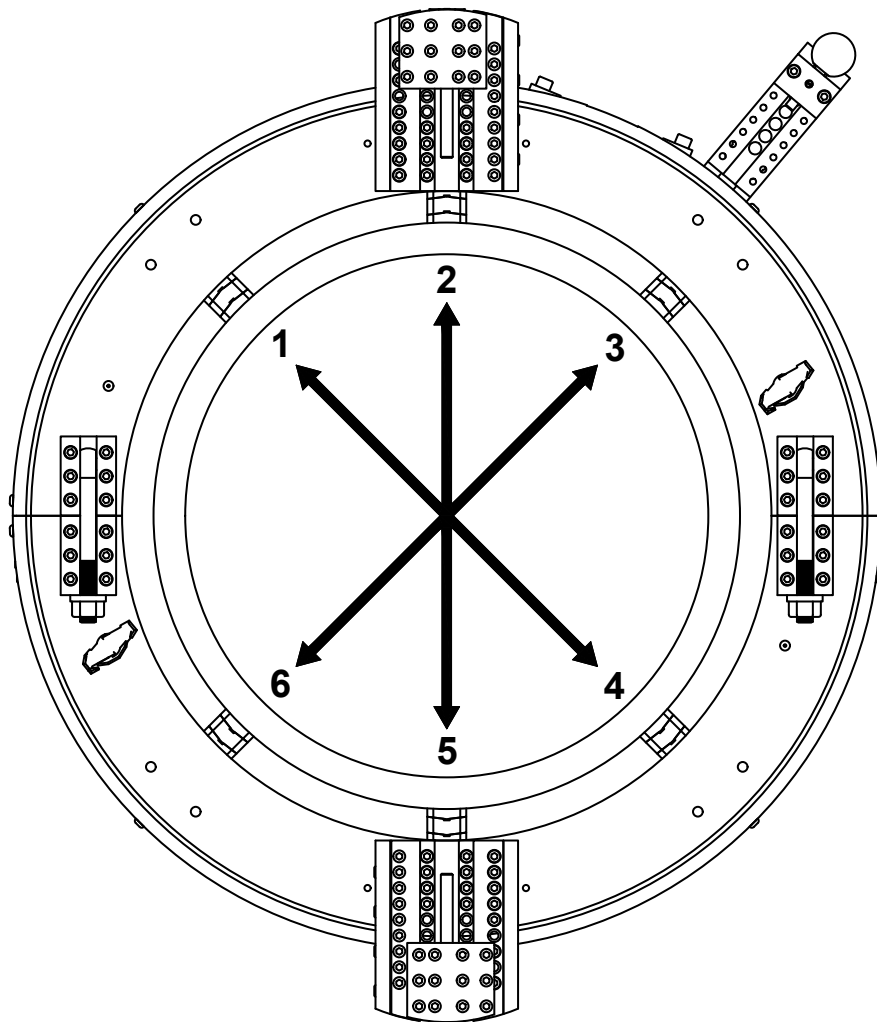


Figure 2-5 – Square and Center Clamshell

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Adjust Feed Mechanism

7. Remove two lock pins. Manually rotate the clamshell gear to check for smooth operation. Make sure the feed pin properly engages both tool block starwheels. Adjust the feed bracket axial and radial positions to engage the feed pin. See Figure 2-6.

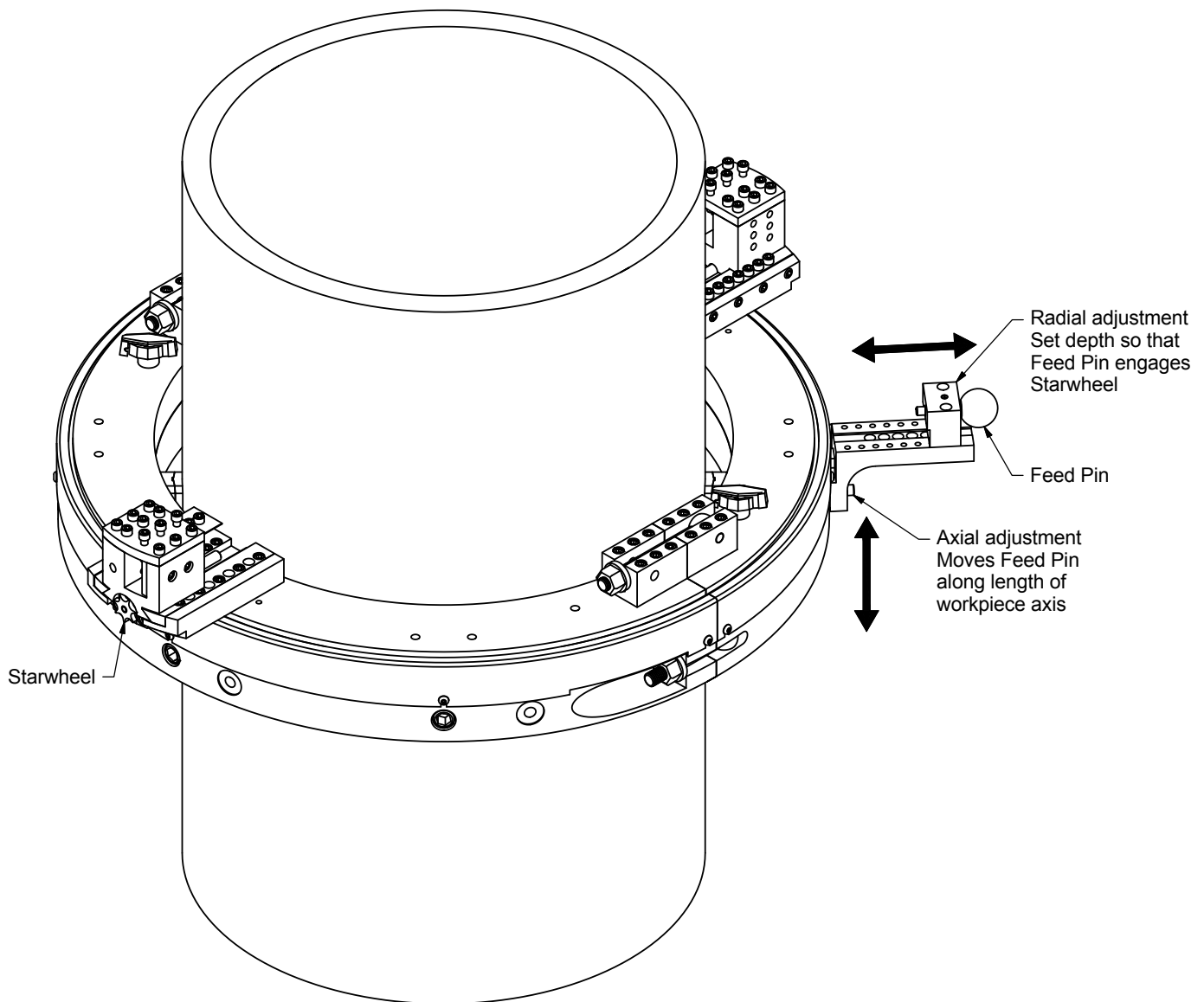


Figure 2-6 – Set Feed Pin Axial and Radial Positions

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

8. Adjust the tool block starwheel to remove feed screw backlash. Using a starwheel wrench, turn the starwheel counter-clockwise until the block begins to move. Set the bottom lobe of the starwheel a few degrees to the left of the vertical centerline. This is the optimal position for indexing the feed pin. Figure 2-7 shows proper feed pin engagement with the starwheel.

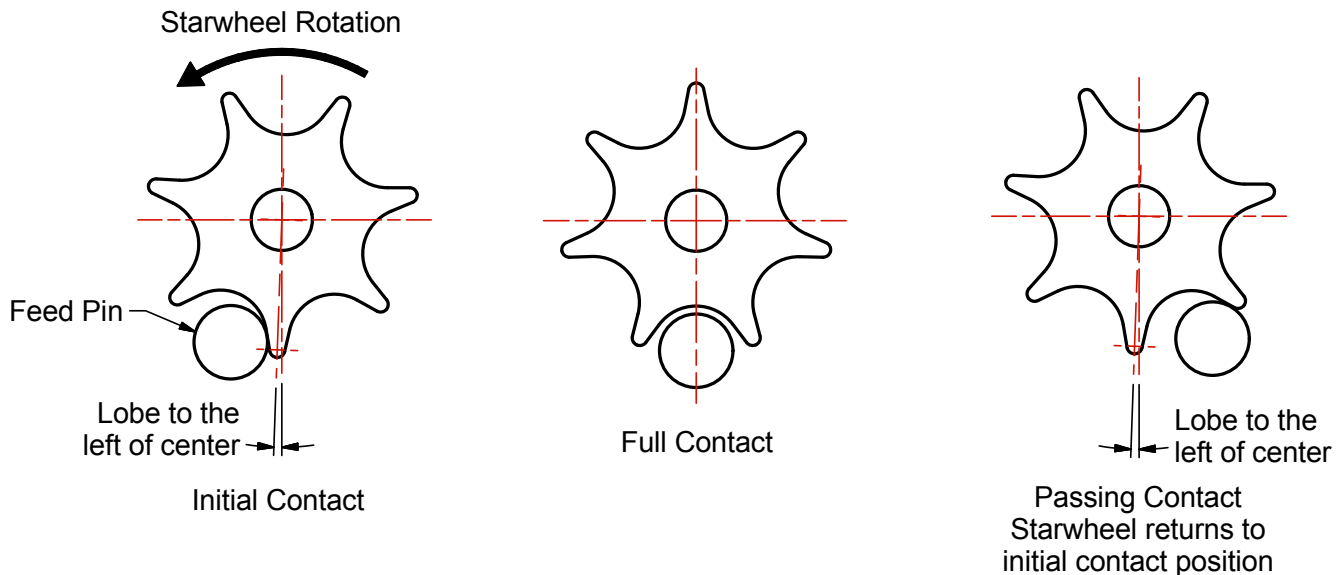


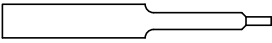
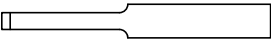
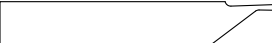
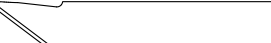
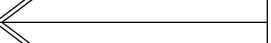
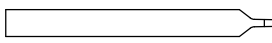
Figure 2-7 – Feed Screw Backlash

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Install Tool Bits

9. Select the tool bit or tool bit set for your machining operation. Other tool bits are available. Contact Mactech for a full list of tool bits available for your machine.

Tool Set		Description	Max Cut Depth
 Narrow Sever- Leads	 Wide Sever - Follows	Sever Set - uses one narrow sever and one wide sever tool bit. 440-0023 - Narrow Sever, 4" long 440-0021 - Wide Sever, 4" long	1.88 inch
		Sever Set - uses one narrow sever and one wide sever tool bit. 440-0120 - Narrow Sever, 6" long 440-0119 - Wide Sever, 6" long	2.25 inch
 37° Sever- Leads	 37° Bevel - Follows	Sever/Bevel 37°, LH Set - uses one sever and one bevel tool bit. 440-0042 - Sever, 5" long, left-hand 440-0041 - Bevel, 5" long, left-hand	1.12 inch
		Sever/Bevel 37°, RH Set - uses one sever and one bevel tool bit. 440-0044 - Sever, 5" long, right-hand 440-0043 - Bevel, 5" long, right-hand	1.12 inch
 37°-10° Sever- Leads	 37°-10° Bevel - Follows	Sever/Compound Bevel 37°-10°, LH Set - uses one sever and one bevel tool bit. 440-0046 - Sever, 5" long, left-hand 440-0045 - Bevel, 5" long, left-hand	2.25 inch
		Sever/Compound Bevel 37°-10°, RH Set - uses one sever and one bevel tool bit. 440-0048 - Sever, 5" long, right-hand 440-0047 - Bevel, 5" long, right-hand	2.25 inch
 Sever - Leads	 37° Double Bevel - Follows	Sever/Double Bevel 37°, Set - uses one sever and two bevel tool bits. 440-0053 - Sever, 5" long 440-0054 - Double Bevel, 5" long, right-hand 440-0055 - Double Bevel, 5" long, left-hand	0.93 inch
 Sever - Leads	 37°-10° Double Bevel - Follows	Sever/Double Bevel 37°-10°, Set - uses one sever and two bevel tool bits. 440-0053 - Sever, 5" long 440-0081 - Double Bevel, 5" long, left-hand 440-0082 - Double Bevel, 5" long, right-hand	1.94 inch
* All Tooling fits in a 3/4 inch Tool Holder			

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

NOTE: The clamshell rotates clockwise when viewed toward the tool block face. Bevel tools are available in left-hand and right-hand versions. Right-hand tools bevel on the side of the cut which the clamshell is mounted. Left-hand tools bevel on the opposite side of the cut. See Figures 2-8 and 2-9.

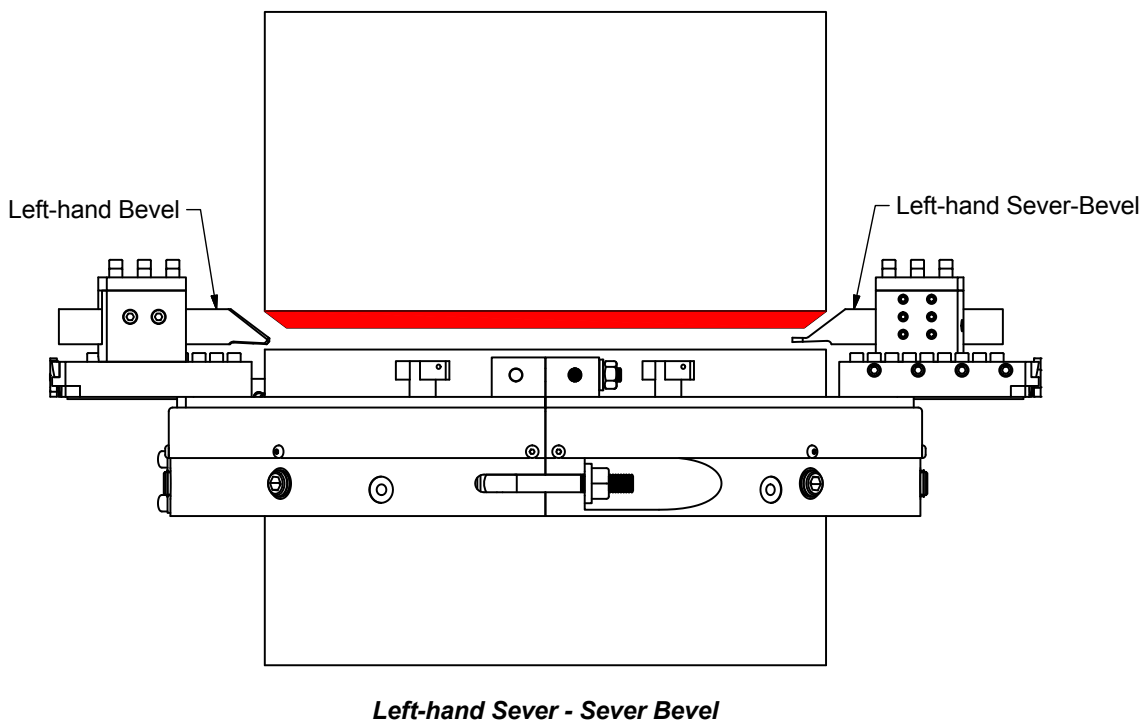
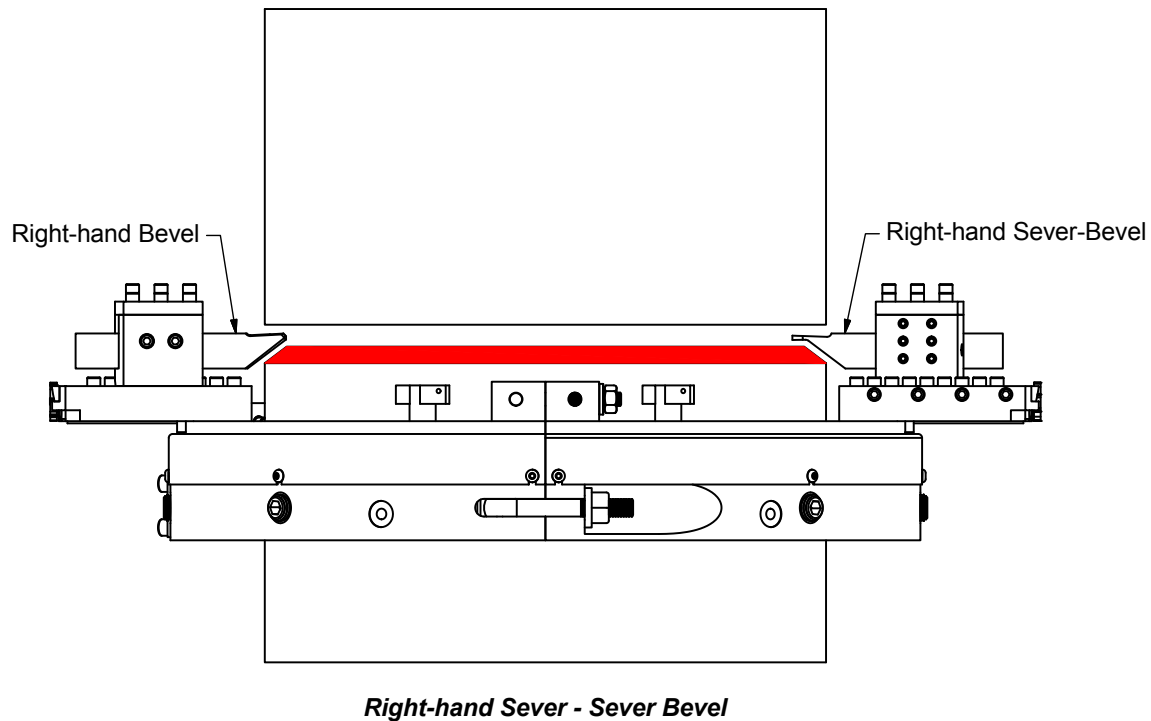


Figure 2-8 – Right-hand and Left-hand Tool Bits

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

10. Use a starwheel wrench to retract both tool blocks away from the workpiece. Disengage the feed pin. See Figure 2-9.

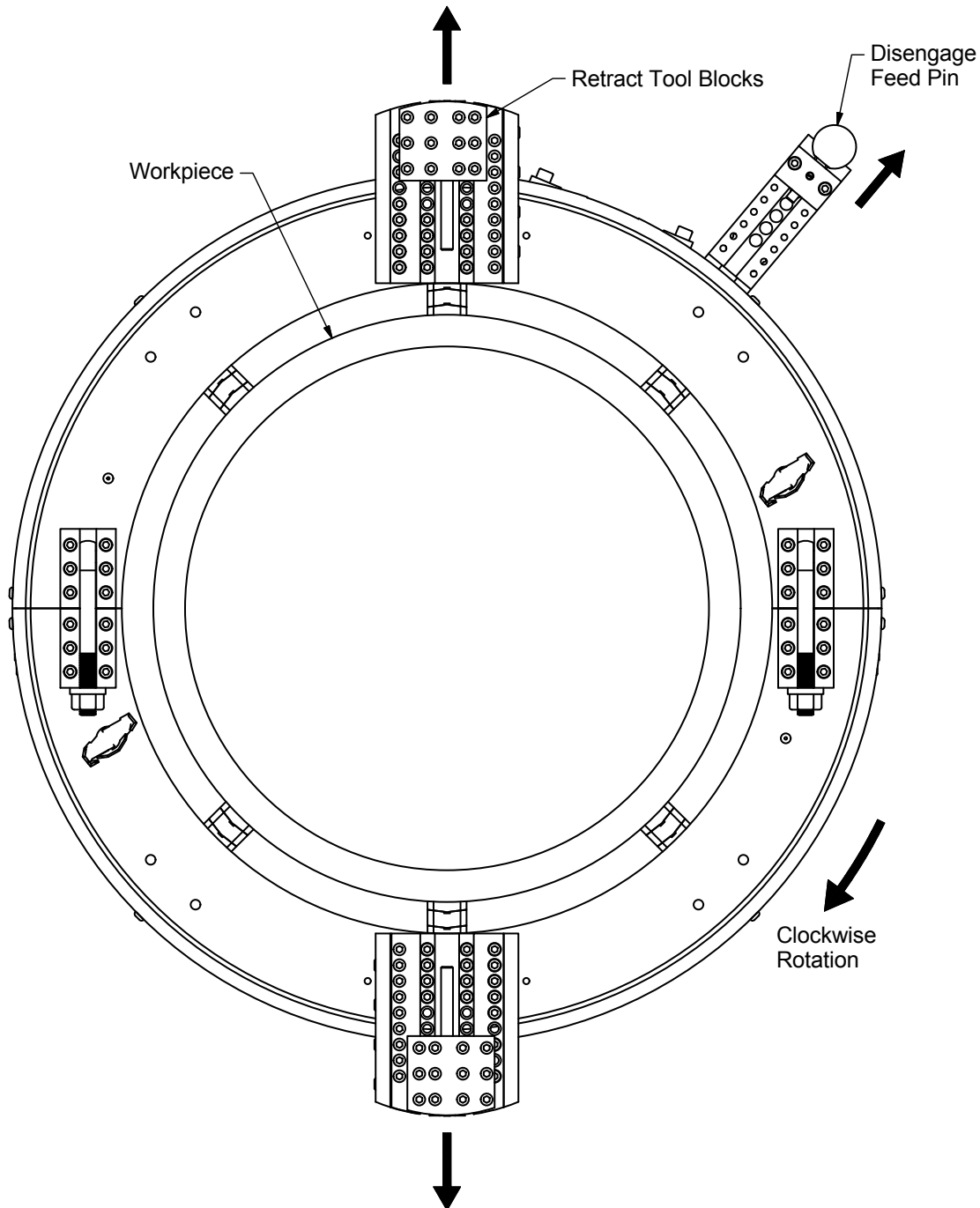


Figure 2-9 – Retract Tool Blocks, Disengage Feed Pin

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

11. Insert a tool bit into each tool block. Use shims to position the tool bit as necessary. Each tool block must use the same thickness of shims. Limit the distance the tool bit extends out of the tool block for greatest rigidity. A rigid setup will help achieve the best performance, accuracy and quality of cuts. See Figure 2-10.

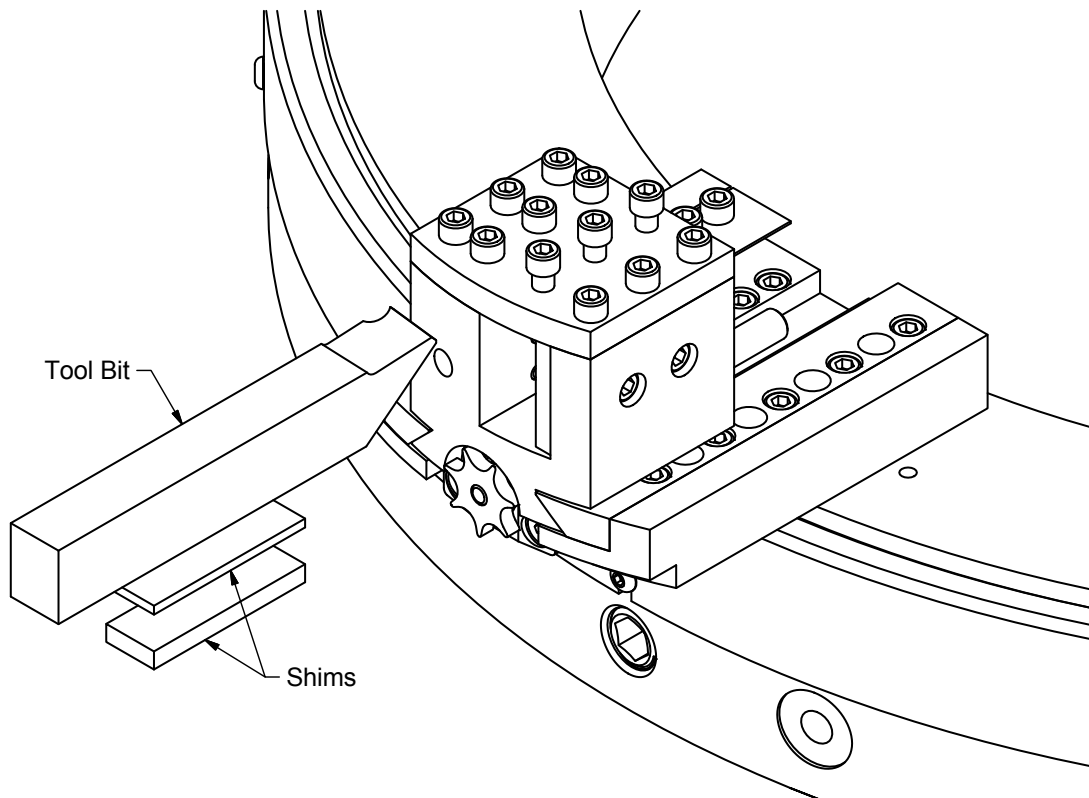


Figure 2-10 – Install Tool Bits and Shims

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

12. The tool bit cutting tip must lie on the centerline of the workpiece. Position each tool bit so that it touches the workpiece. Lightly tighten set screws on top of each tool block to hold the tool bits, yet allow movement to set the tool bit at the proper position. See Figure 2-11.

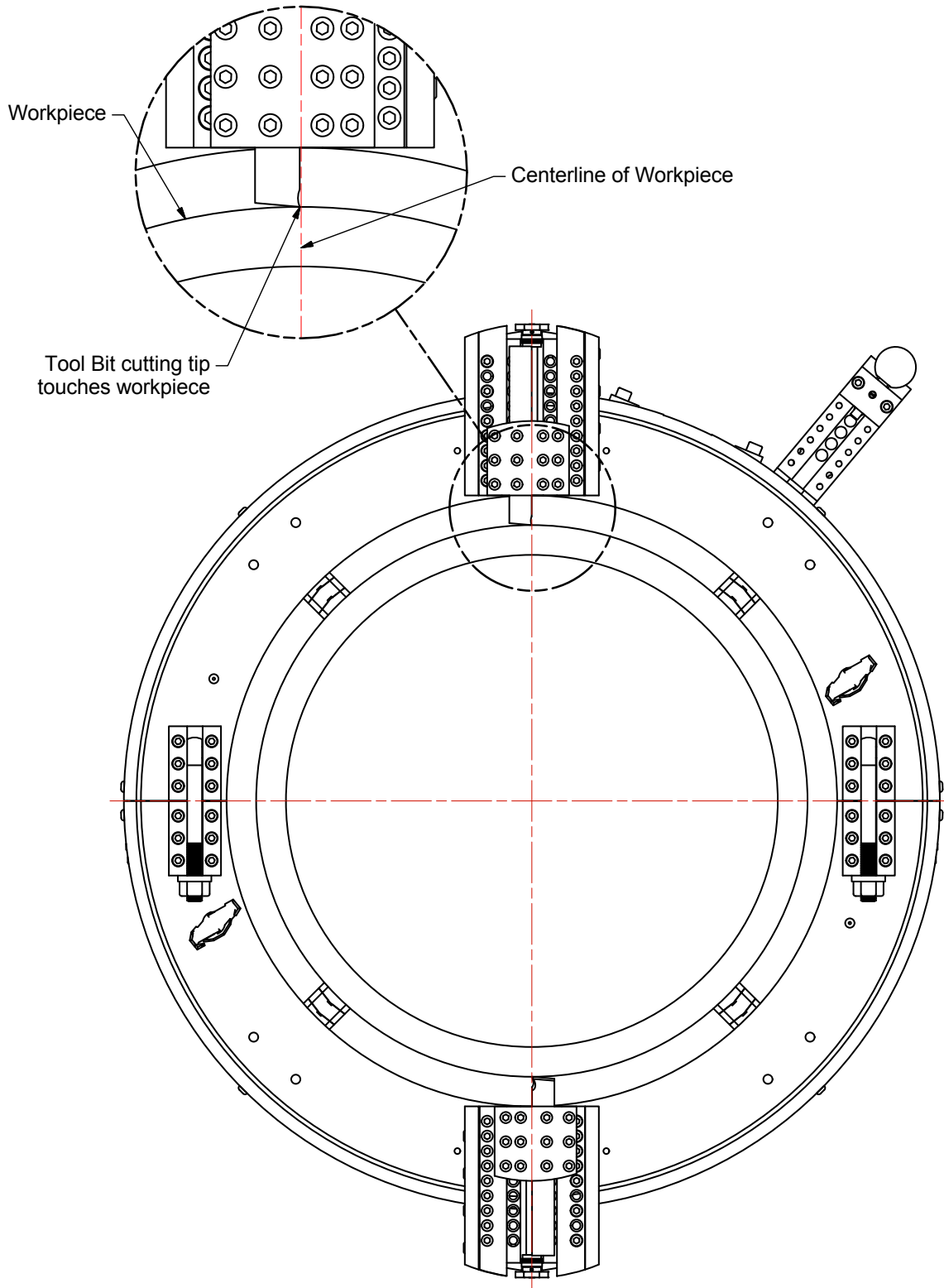


Figure 2-11 – Position Tool Bits

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

13. Manually rotate the clamshell counter-clockwise one revolution. This will push the tool bits away from the workpiece high point and will prevent gouging. Firmly tighten the set screws on the side of the tool block, and the cap screws on top of the tool block to hold the tool bits.

Set Leading/Following Tool Bits

14. Sever-bevel and narrow-wide sever bit combinations require a lead and follow tool bit setup. Sever bits must lead bevel bits, and narrow-sever bits must lead wide-sever bits. Follow steps 2-9 through 2-13 for installing a tool bit. This sets the position for the leading tool bit.
15. Back the following tool bit away from the workpiece slightly more than the leading tool bit. This will allow the leading tool bit to begin the cut before the following tool bit. As the cut is made further tool bit adjustment may be required. See Figure 2-12.

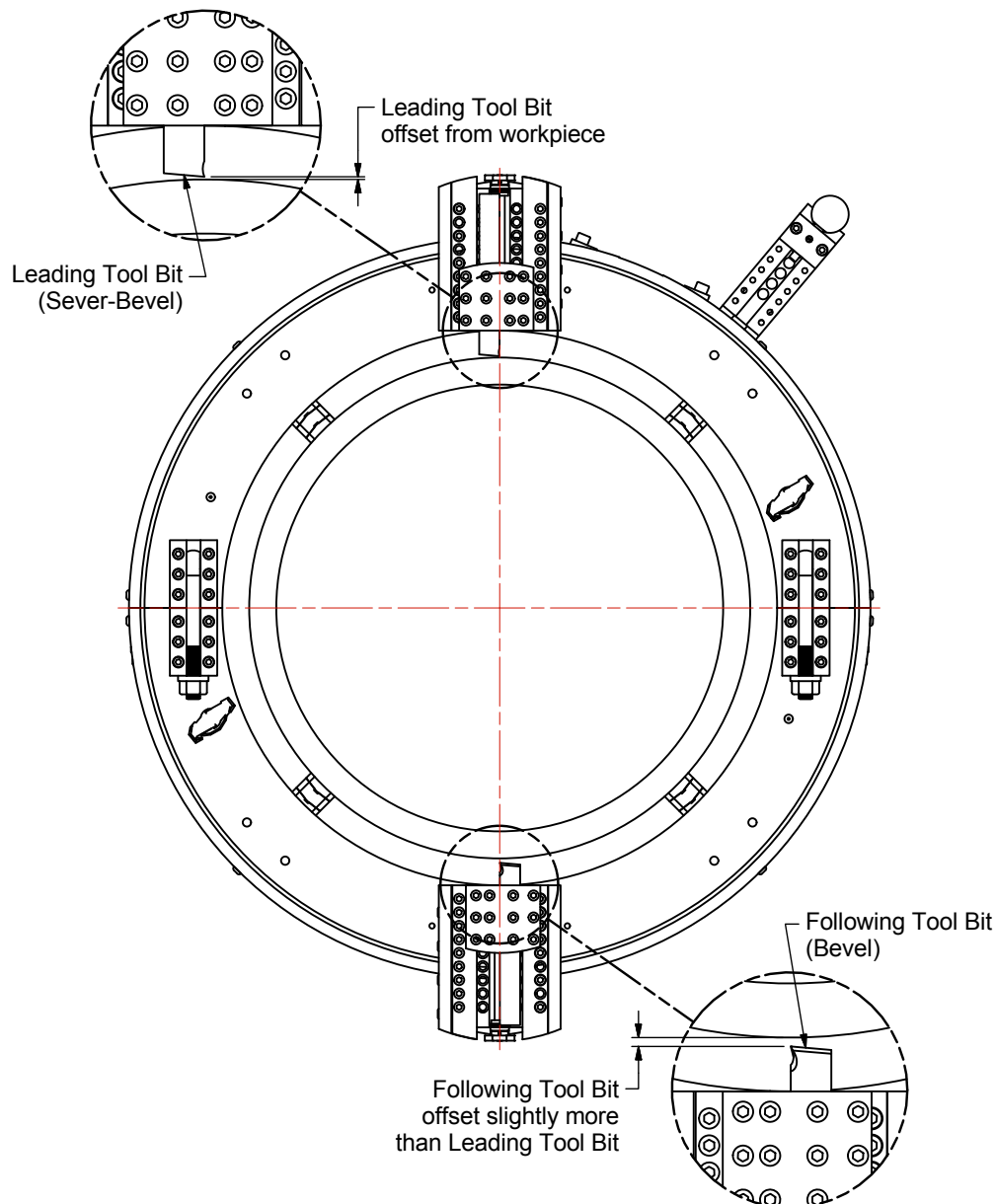


Figure 2-12 – Set Leading/Following Tool Bits

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Install Drive Motor

- 16.** Install the drive motor assembly onto the clamshell. Slide the drive slot over the mounting brackets on the clamshell. Tighten the mounting bracket fasteners to secure the drive. Mesh the drive gear with the clamshell gear. Push the drive assembly up until it stops. Secure the drive to the clamshell by tightening four mounting bracket screws. See Figure 2-13.

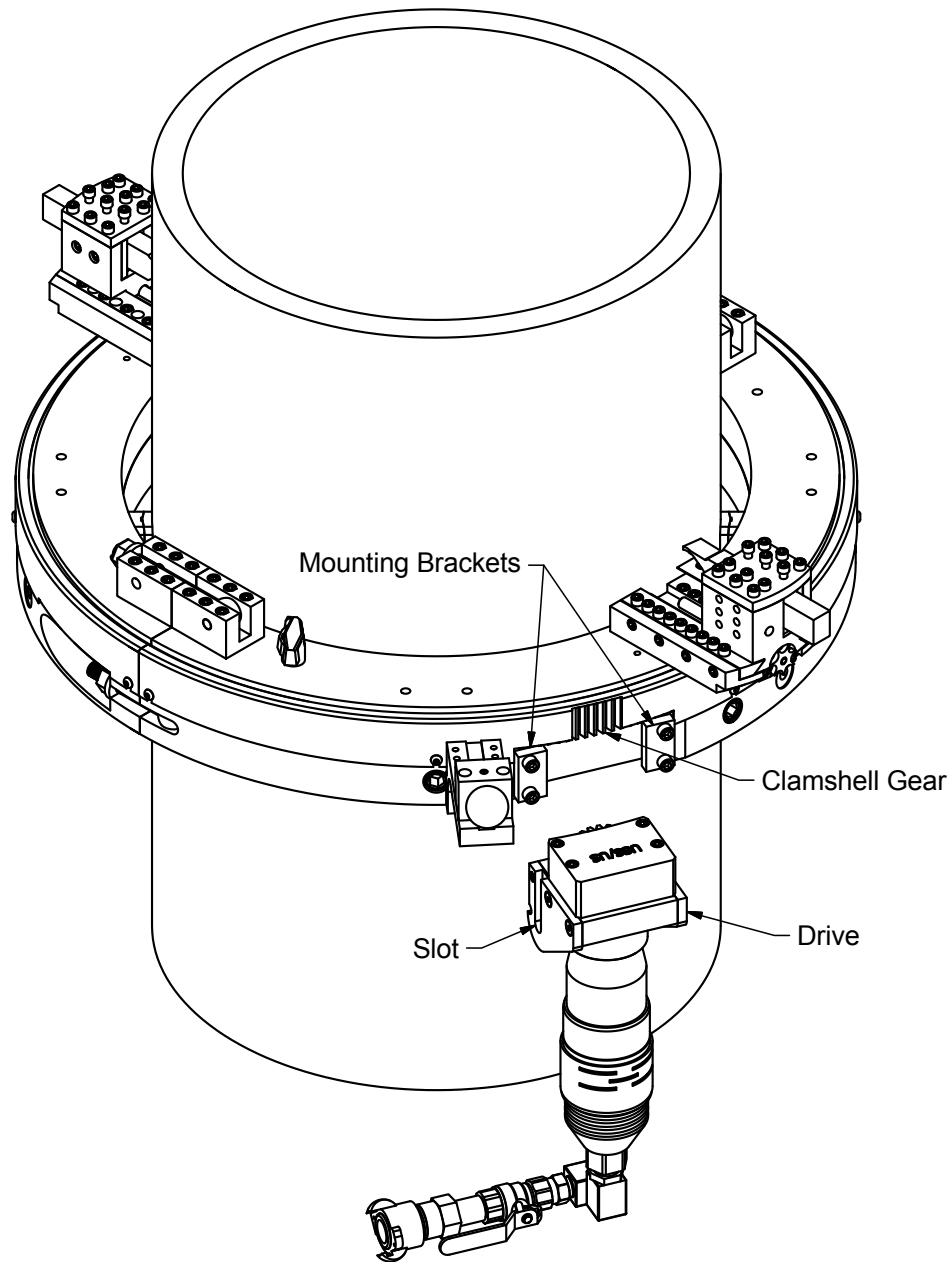


Figure 2-13 – Install Drive Motor

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Section 3 - Operation

Sever In-line Pipe

1. Install two sever bits. With the tool bits touched off the workpiece, turn the starwheel one revolution to back the tool bits slightly away from the workpiece. Make sure the starwheel is set at the initial contact position, as shown in Figure 2-7. Make sure the power supply is off. Connect the power supply to the drive motor. Disengage the feed pin and slowly apply power to check the function and speed of the clamshell.
2. Engage the feed pin to begin cutting. Use the power supply to control the rotation speed. If chattering or vibration occurs reduce the rotation speed. Use coolant to reduce friction. Replace dull tool bits as required.
3. Disengage the feed pin. Allow the machine to rotate at least two times without the feed activated to clear the cut of any burrs or hanging metal. Cut power from the power supply to stop cutting. Disconnect hoses. Back each tool block away from the clamshell as far back as possible.

Sever/Bevel In-line Pipe

1. Install two left or right-hand sever/bevel bits. With the tool bits touched off the workpiece, turn the starwheel one revolution to back the tool bits slightly away from the workpiece. Make sure the starwheel is set at the initial contact position, as shown in Figure 2-7. Make sure the power supply is off. Connect the power supply to the drive motor. Disengage the feed pin and slowly apply power to check the function and speed of the clamshell.
2. Engage the feed pin to begin cutting. Use the power supply to control the rotation speed. Machine the bevel to a sharp edge. If the pipe is out of round, re-center the clamshell to the pipe and complete the bevel operation. If chattering or vibration occurs reduce the rotation speed. Use coolant to reduce friction. Replace dull tool bits as required.
3. Disengage the feed pin. Allow the machine to rotate at least two times without the feed activated to clear the cut of any burrs or hanging metal. Cut power from the power supply to stop cutting. Disconnect hoses. Back each tool block away from the clamshell as far back as possible.

NOTE: Use the emergency-stop button on the hydraulic pendant control to immediately cut power to the machine.

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Gibs Adjustment

NOTE: The tool blocks must move smoothly along the slides. The gibs may require adjustment due to wear or heavy use. The gibs must be parallel to the slide for proper feed function. Disconnect the power supply before adjusting the gibs.

1. Use a starwheel wrench to back the tool block fully away from the clamshell center. Remove the two flat head screws which hold the tool block and feed screw on the slide. Pull the tool block and feed screw assembly out of the slide. See Figure 3-1.

NOTE: Inspect the gibs for burrs, sharp edges, or other damage that may prevent the tool block from sliding freely along the gibs. Replace gibs as necessary. Lubricate the gibs with a light coat of machine oil.

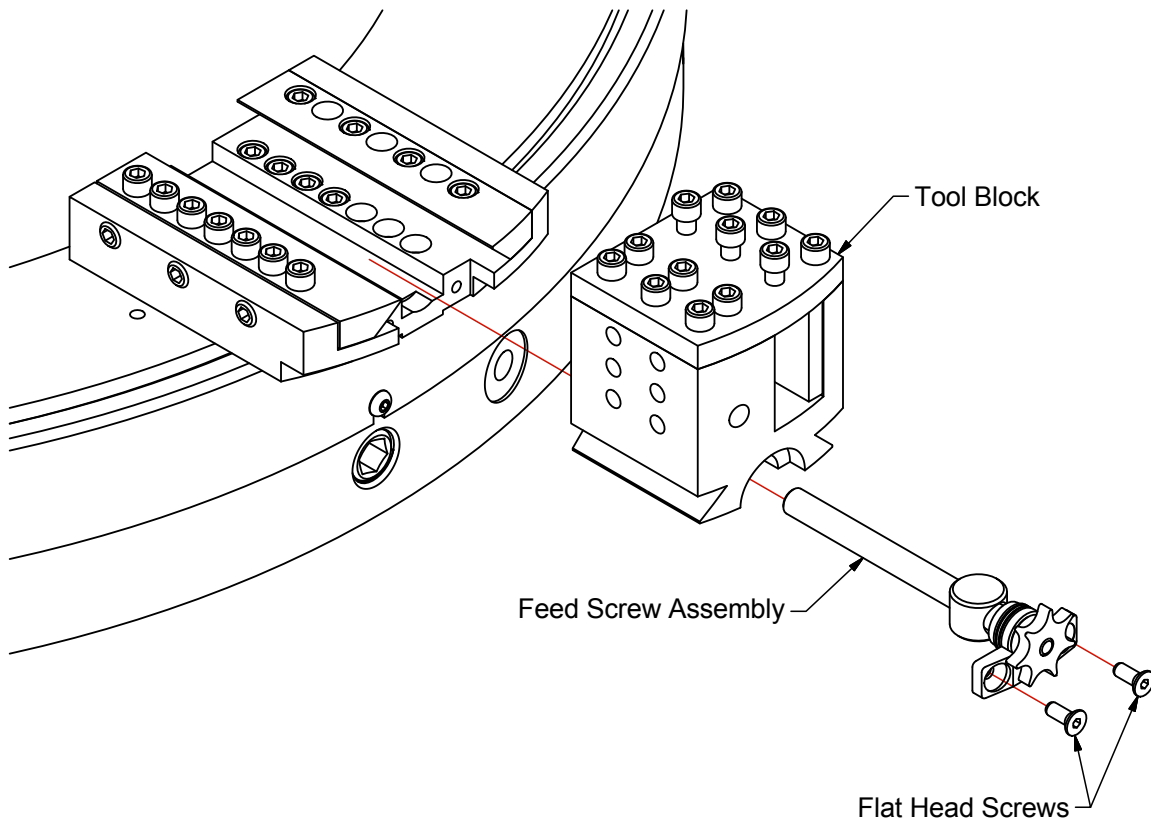


Figure 3-1 - Remove Feed Screw and Tool Block

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

2. Install shims into the tool block to simulate a tool bit. Tighten the tool bit retaining screws. Replace the tool block only (without feed screw assembly) into the slide. Tighten the set screws on the side of the slide 1/4 turn. Loosen the cap screws on top of the adjustable gib if necessary. Move the tool block in the slide. There should be no slop and no binding. Continue to adjust set screws as necessary so that the tool block slides smoothly. The tool block must move easily with slight resistance, with no slop or binding. Resistance must be the same along the entire length of the slide. It may be necessary to move the tool block by tapping with a deadblow hammer (included in the hand tool kit). Adjust set screws as necessary. Tighten the cap screws on top of the adjustable gib. See Figure 3-2.

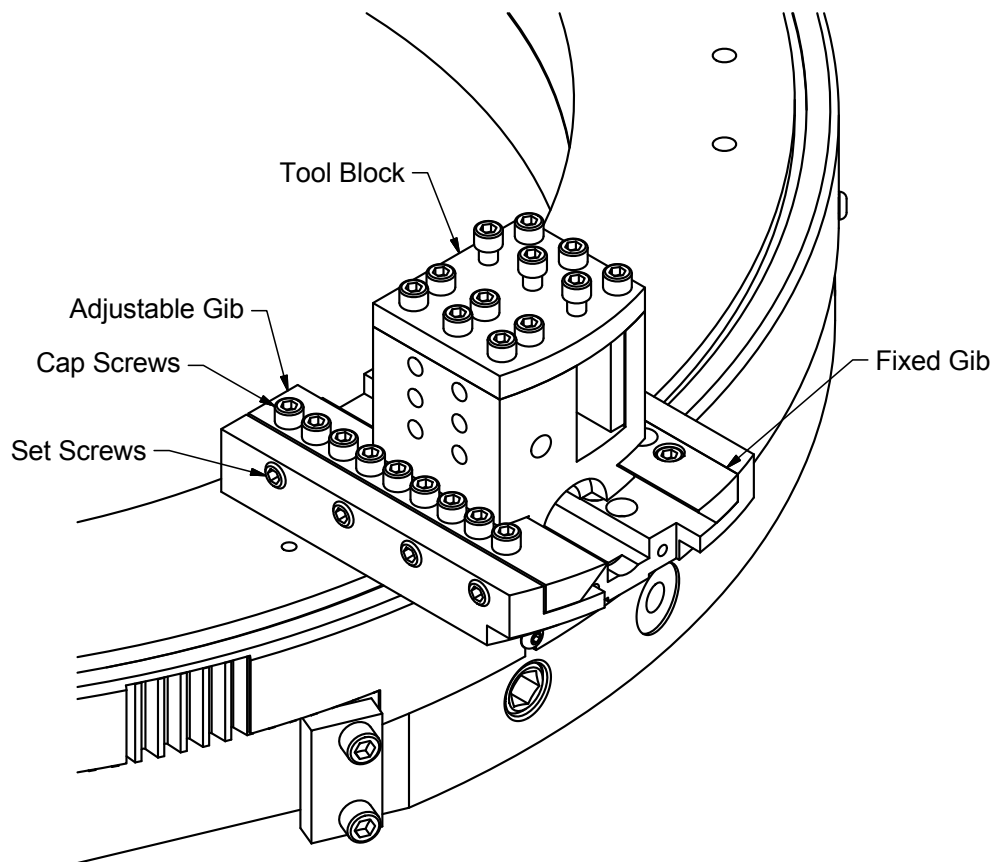


Figure 3-2 - Adjust Gibs

3. Remove the tool block. Reassemble the feed screw assembly onto the tool block. Reassemble the tool block on the slide. Use a starwheel wrench to move the tool block along the slide to check the slide adjustment.

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Section 4 - Cleaning, Inspection and Maintenance

CAUTION: *The lock pins must be in place before disassembly of the clamshell at the split line. The ring gear may roll out of the clamshell body if the lock pins are not in place. This may result in damage to the machine or serious injury to the user.*

NOTE: *Cleaning and maintenance must be performed after each use to maintain the operation and life of the machine.*

1. After each use wipe down the entire machine with a clean rag. Remove metal shavings, oil, dirt and debris from the machine.
2. If the machine has been exposed to saltwater or used in other corrosive environments, rinse off the entire machine with freshwater immediately after use. Dry the machine as thoroughly as possible. It is important to remove all saltwater to prevent corrosion. The machine may require disassembly and thorough drying and lubrication of all components to remove all saltwater.
3. Check the machine for damage, loose or missing parts and excessive wear to components.
4. Inspect the tool blocks and feed pins. Make sure that all metal shavings, dirt and debris are removed. Make sure there is no damage to components and all parts are functional. Lubricate the feed screw with machine oil.
5. Check the locators and extensions for damage or wear. Make sure all fasteners are present and in good condition.

USS CLAMSHELL PORTABLE LATHES

MACTECH PORTABLE MACHINING SOLUTIONS

Section 5 - Assembly Drawings and Hand Tool List

USS Clamshell Packages	
<i>Drawing No.</i>	<i>Description</i>
605-2790C	816USS Clamshell Package
605-0367C	820USS Clamshell Package
605-0418C	824USS Clamshell Package
605-2798C	828USS Clamshell Package
605-2758C	830USS Clamshell Package
605-2759C	832USS Clamshell Package
605-2770C	836USS Clamshell Package

USS Clamshell Main Body Assemblies	
<i>Drawing No.</i>	<i>Description</i>
600-2790C	816USS Main Body Assembly
600-0367C	820USS Main Body Assembly
600-0418C	824USS Main Body Assembly
600-2798C	828USS Main Body Assembly
600-2758C	830USS Main Body Assembly
600-2759C	832USS Main Body Assembly
600-2770C	836USS Main Body Assembly

USS Clamshell Tool Blocks and Slides	
<i>Drawing No.</i>	<i>Description</i>
600-2726	#2 Tool Block and Slide Assembly
600-2727	#3 Tool Block and Slide Assembly
600-2728	#4 Tool Block and Slide Assembly
600-2723	#6 Tool Block and Slide Assembly

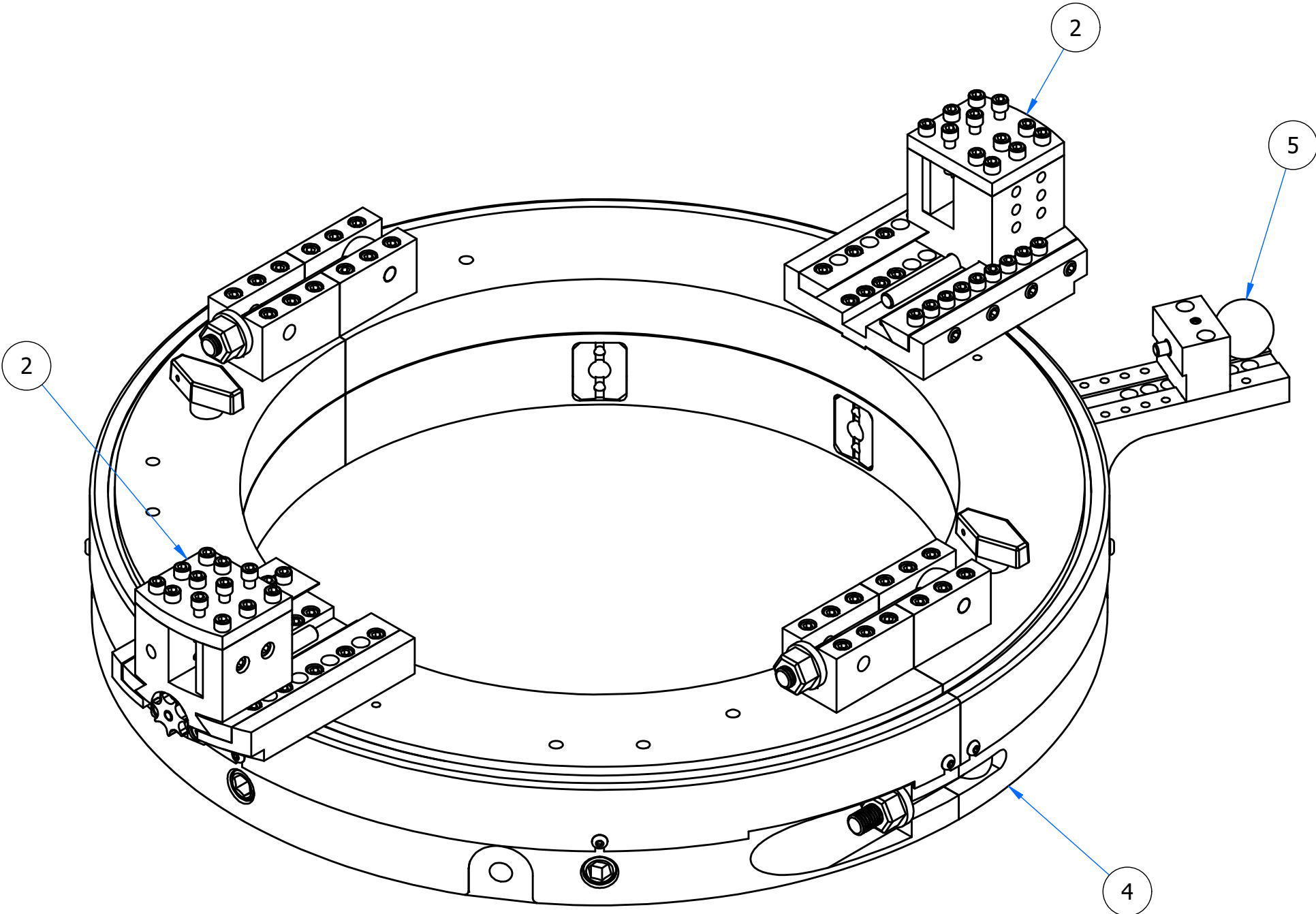
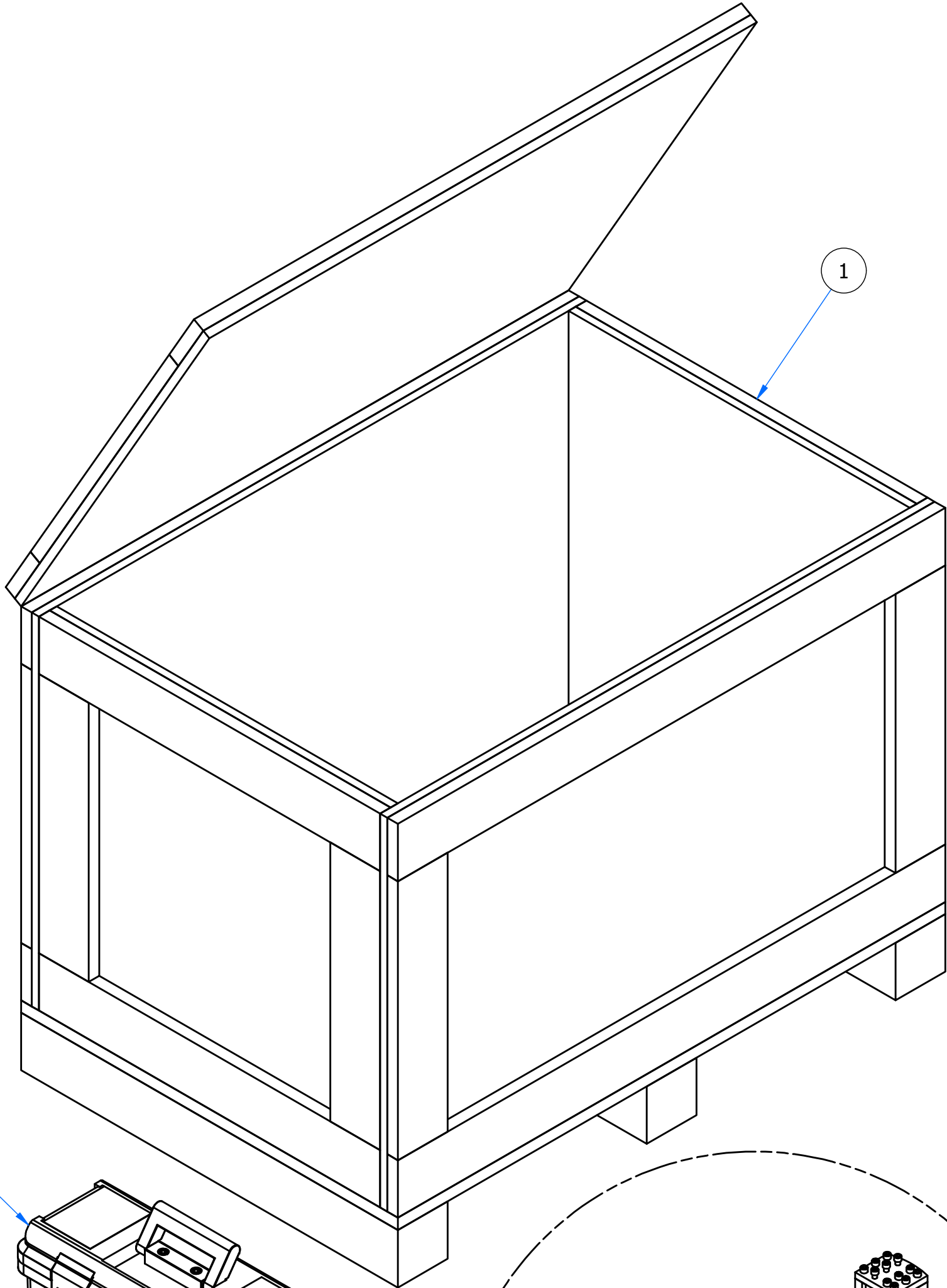
USS Clamshell Drives	
<i>Drawing No.</i>	<i>Description</i>
Air Drives	
605-4206D	Reversible Air Drive Package
600-4206D	Reversible Air Drive Assembly
605-4221D	Inline Air Drive Package
600-4221D	Inline Air Drive Assembly
605-4231D	Inline Air Drive Package
600-4231D	Inline Air Drive Assembly
605-4231E	Inline Air Drive Package
600-4231E	Inline Air Drive Assembly
605-4286D	Right Angle Air Drive Package
600-4286D	Right Angle Air Drive Assembly
605-6779A	Reversible Air Drive Package
600-6779A	Reversible Air Drive Assembly
605-6831	Right Angle Drive Air Package
600-6831	Right Angle Air Drive Assembly
Hydraulic Drives	
600-4241A	Hydraulic Drive, Inline
600-6779H	Hydraulic Drive, Reversible
Electric Drives	
600-6779E	Reversible Electric Drive, 110V
600-6782	Inline Electric Drive, 110V
600-6801	Inline Electric Drive, 220V
600-6802	Reversible Electric Drive, 220V

USS Clamshell Feed Brackets	
<i>Drawing No.</i>	<i>Description</i>
600-6760	Feed Bracket Assembly
600-2771	Feed Bracket Assembly

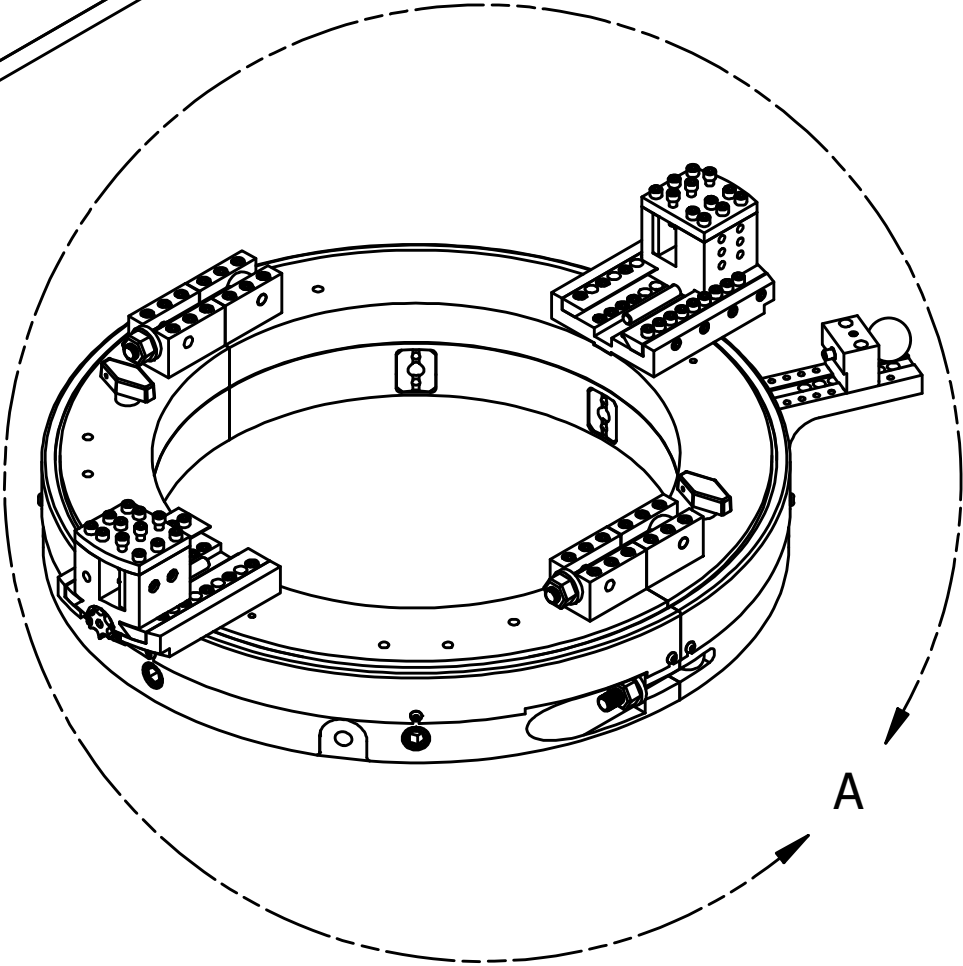
USS Clamshell Locator Extensions	
<i>Drawing No.</i>	<i>Description</i>
600-2768	Locator Extension Set

USS Clamshell Tool Kit	
<i>Drawing No.</i>	<i>Description</i>
601-USS	USS Clamshell Tool Kit

REVISIONS				
REV	ECO	DESCRIPTION	DATE	APPROVED
A	#767	REMOVED 600-2768-SET6, ADDED 600-2768	10/17/22	CDM



DETAIL A
SCALE 1 / 3



PARTS LIST				
ITEM	PART NUMBER	QTY	DESCRIPTION	
1	091-0060	1	SHIPPING BOX - 38.5 X 26.5 X 29.5H	
2	600-2728	2	#4 US 1" TOOL BLOCK & SLIDE ASSEMBLY	
3	600-2768	6	USS STACKABLE LOCATOR EXTENSION SET	
4	600-2790C	1	816USS MAIN BODY ASSEMBLY	
5	600-6760	1	STD USS 7PT FEED BRACKET ASSY - 816-824	
6	601-USS	1	USS HAND TOOL KIT	
7	900-0013	1	USS Clamshell Portable Lathe Manual	
			TOLERANCES UNLESS OTHERWISE NOTED DECIMALS: .XXX ± .003 .XX ± .01 .X ± .1 FRACTIONS: ± 1/16 ANGULAR: ± 1° REMOVE ALL BURRS AND SHARP EDGES	MATERIAL CALCULATED MASS N/A
			DESCRIPTION 816USS CLAMSHELL PACKAGE	
			PART NUMBER 605-2790C	
			SCALE 1/6	SIZE C
			SHEET 1 OF 1	

MACTECH

INFORMATION CONTAINED IN THIS DRAWING IS NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF MACTECH INC.

DRAWN
cmeyer

DESIGNED
cmeyer

12/29/2016

PART NUMBER

605-2790C

SCALE

1/6

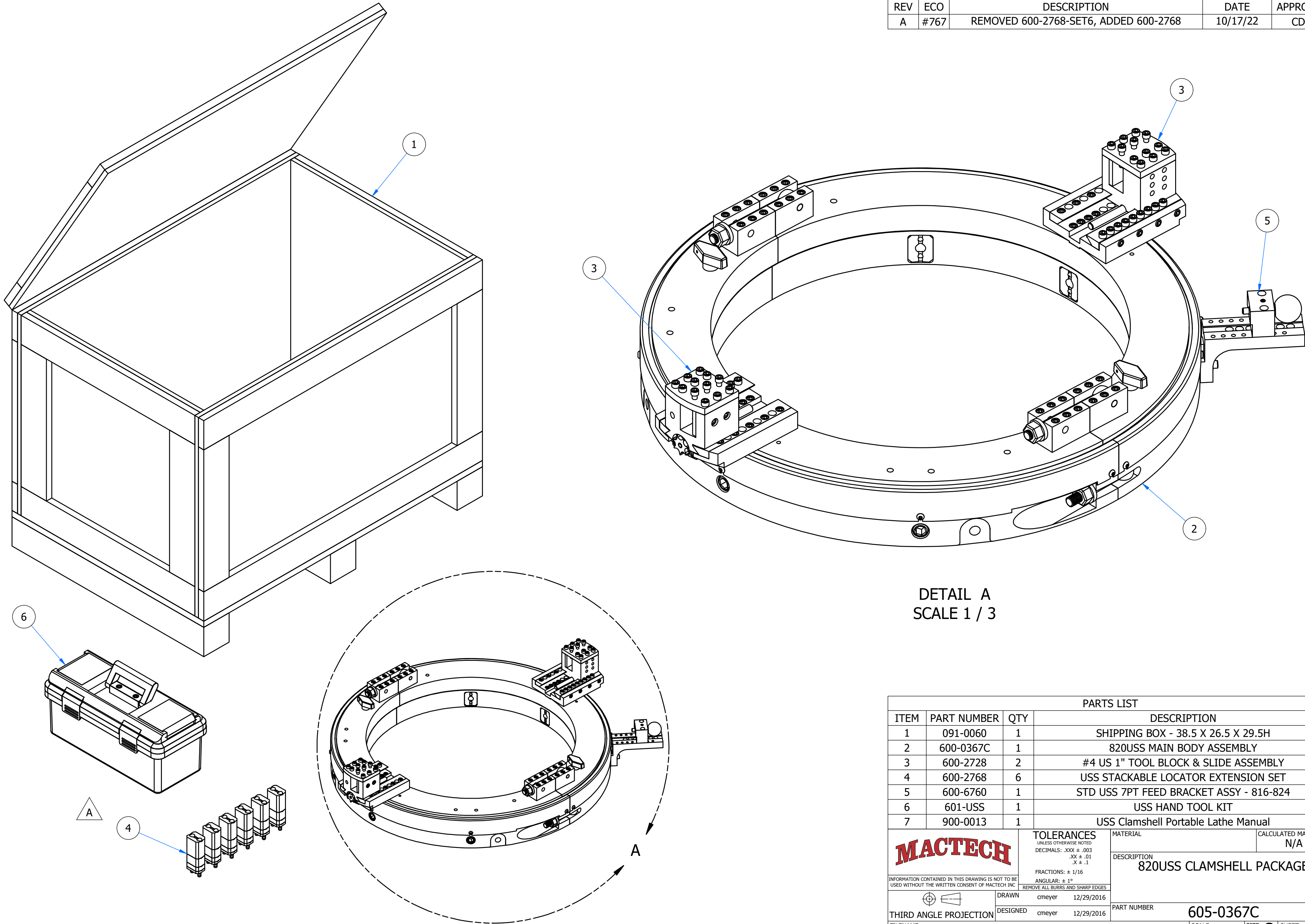
SIZE

C

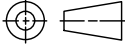
SHEET

1 OF 1

REVISIONS				
REV	ECO	DESCRIPTION	DATE	APPROVED
A	#767	REMOVED 600-2768-SET6, ADDED 600-2768	10/17/22	CDM

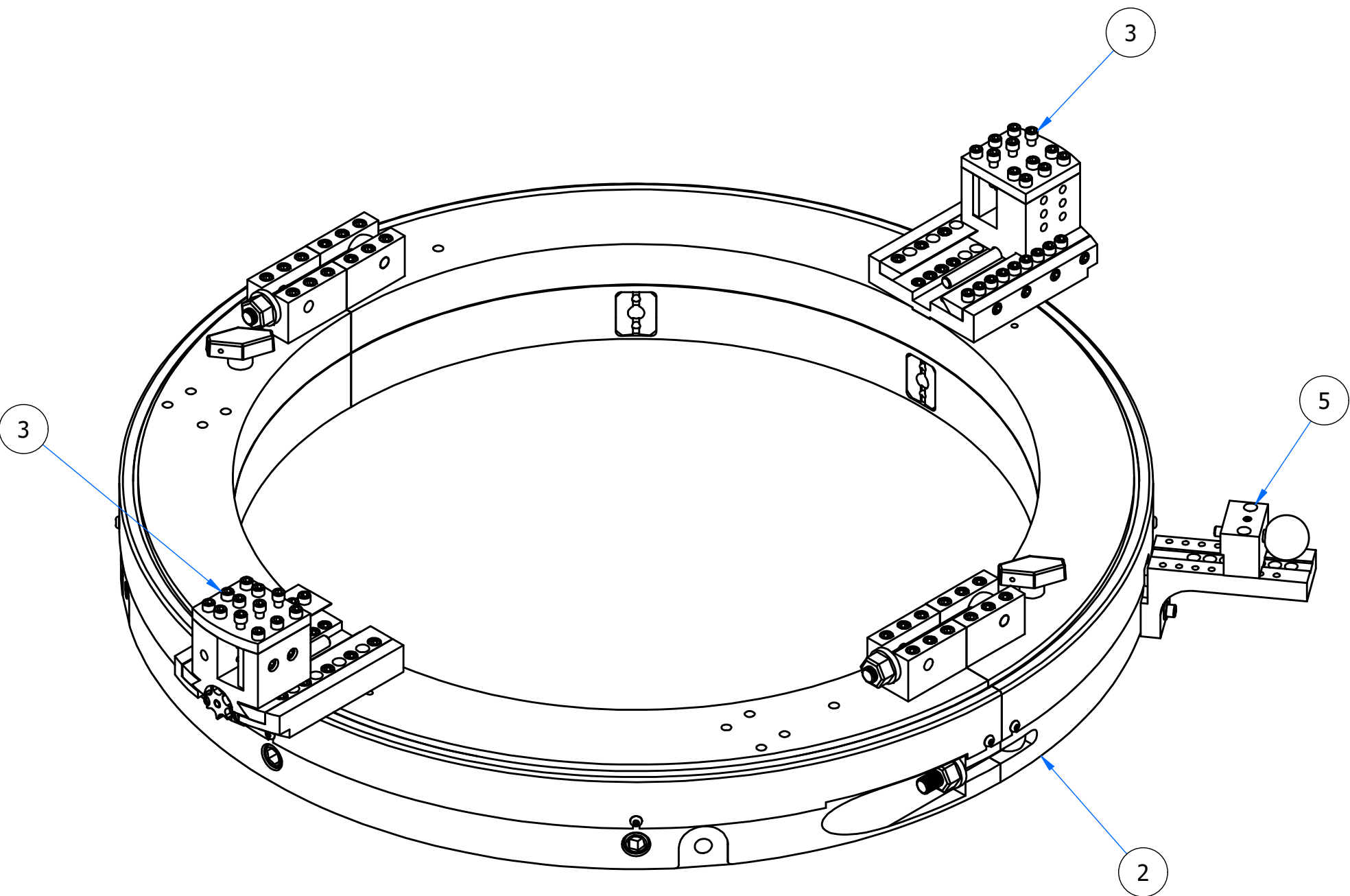
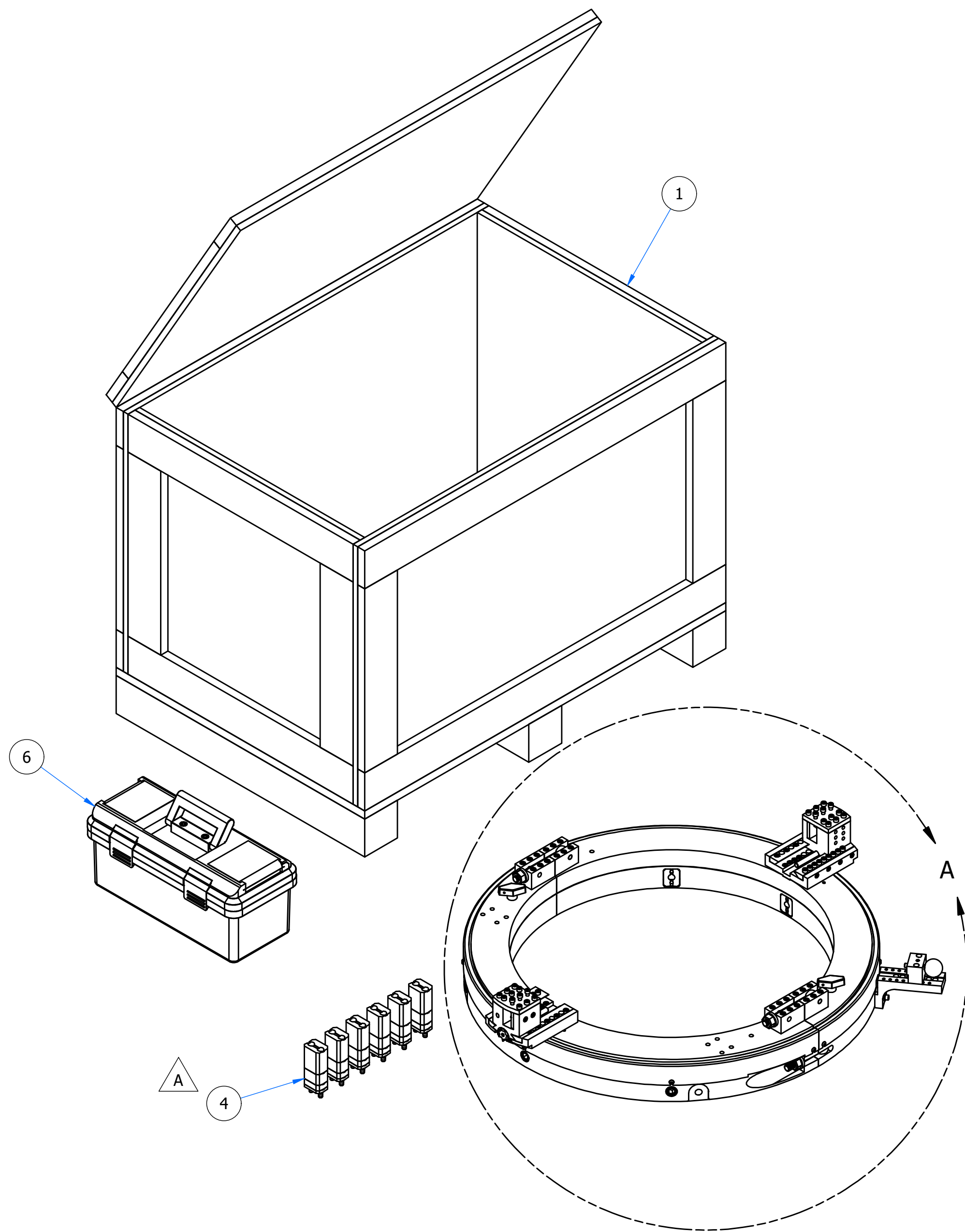


PARTS LIST			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	091-0060	1	SHIPPING BOX - 38.5 X 26.5 X 29.5H
2	600-0367C	1	820USS MAIN BODY ASSEMBLY
3	600-2728	2	#4 US 1" TOOL BLOCK & SLIDE ASSEMBLY
4	600-2768	6	USS STACKABLE LOCATOR EXTENSION SET
5	600-6760	1	STD USS 7PT FEED BRACKET ASSY - 816-824
6	601-USS	1	USS HAND TOOL KIT
7	900-0013	1	USS Clamshell Portable Lathe Manual

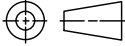
MACTECH INFORMATION CONTAINED IN THIS DRAWING IS NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF MACTECH INC.  THIRD ANGLE PROJECTION FILENAME C:_Vault\Inv Final Drawings\605-605-0367C.idw	TOLERANCES UNLESS OTHERWISE NOTED DECIMALS: .XXX ± .003 .XX ± .01 .X ± .1 FRACTIONS: ± 1/16 ANGULAR: ± 1° REMOVE ALL BURRS AND SHARP EDGES DRAWN cmeyer 12/29/2016 DESIGNED cmeyer 12/29/2016	MATERIAL DESCRIPTION 820USS CLAMSHELL PACKAGE PART NUMBER 605-0367C	CALCULATED MASS N/A
---	--	--	------------------------------------

SCALE 1/6	SIZE C	SHEET 1 OF 1
-----------	--------	--------------

REVISIONS				
REV	ECO	DESCRIPTION	DATE	APPROVED
A	N/A	REMOVED 600-2768-SET6, ADDED 600-2768	10/17/22	CDM



DETAIL A
SCALE 1/4

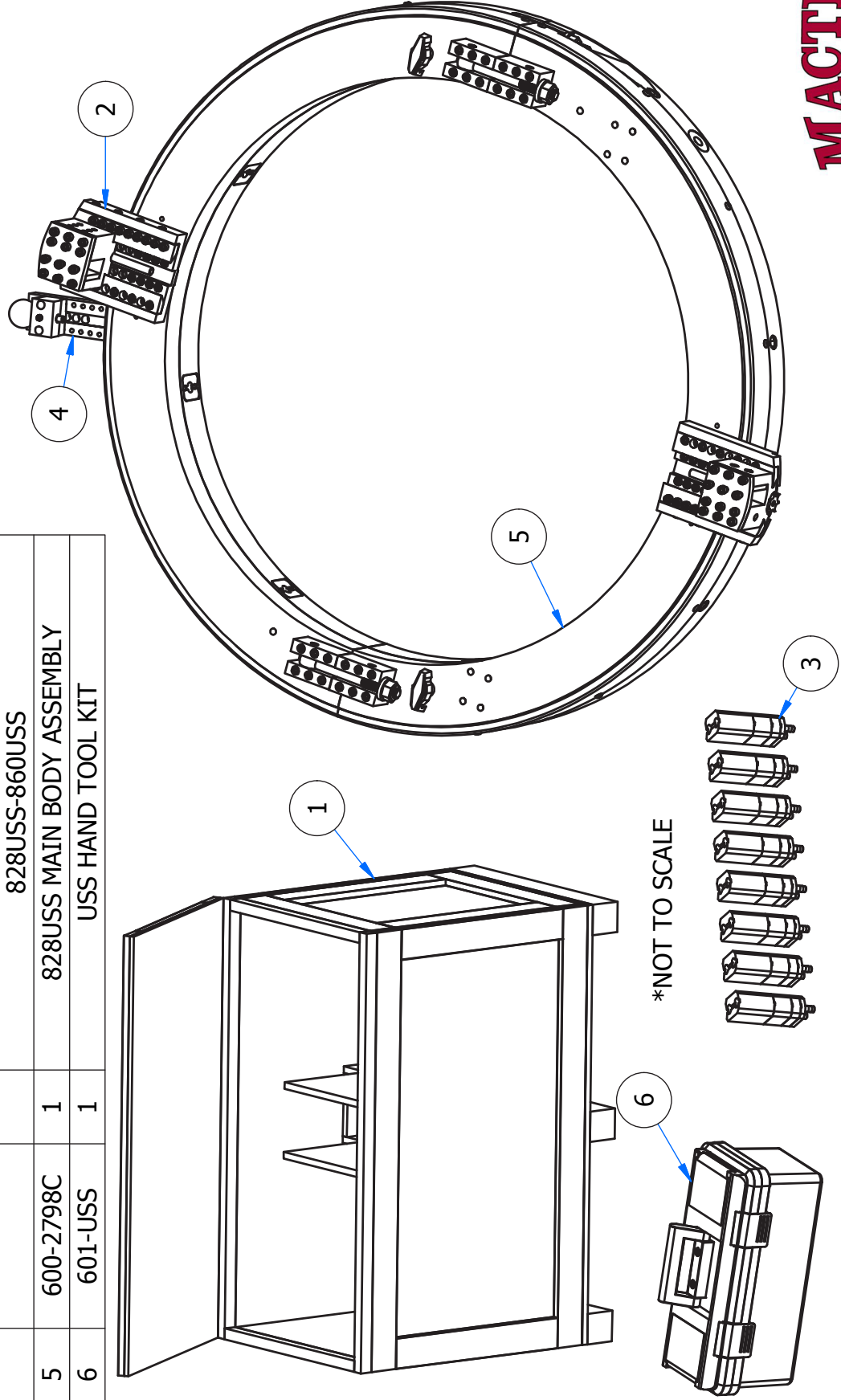
PARTS LIST				
ITEM	PART NUMBER	QTY	DESCRIPTION	
1	091-0060	1	SHIPPING BOX - 38.5 X 26.5 X 29.5H	
2	600-0418C	1	824USS MAIN BODY ASSEMBLY	
3	600-2728	2	#4 US 1" TOOL BLOCK & SLIDE ASSEMBLY	
4	600-2768	6	USS STACKABLE LOCATOR EXTENSION SET	
5	600-6760	1	STD USS 7PT FEED BRACKET ASSY - 816-824	
6	601-USS	1	USS HAND TOOL KIT	
7	900-0013	1	USS Clamshell Portable Lathe Manual	
MACTECH UNLESS OTHERWISE NOTED DECIMALS: .XXX ± .003 .XX ± .01 .X ± .1 FRACTIONS: ± 1/16 ANGULAR: ± 1° REMOVE ALL BURRS AND SHARP EDGES		MATERIAL		CALCULATED MASS N/A
		DESCRIPTION 824USS CLAMSHELL PACKAGE		
 THIRD ANGLE PROJECTION		DRAWN cmeyer 12/29/2016		
		DESIGNED cmeyer 12/29/2016		PART NUMBER 605-0418C
FILENAME C:\Vault\Inv Final Drawings\605-605-0418C.idw			SCALE 1/7	SIZE C SHEET 1 OF 1

828USS CLAMSHELL PACKAGE

605-2798C

PARTS LIST

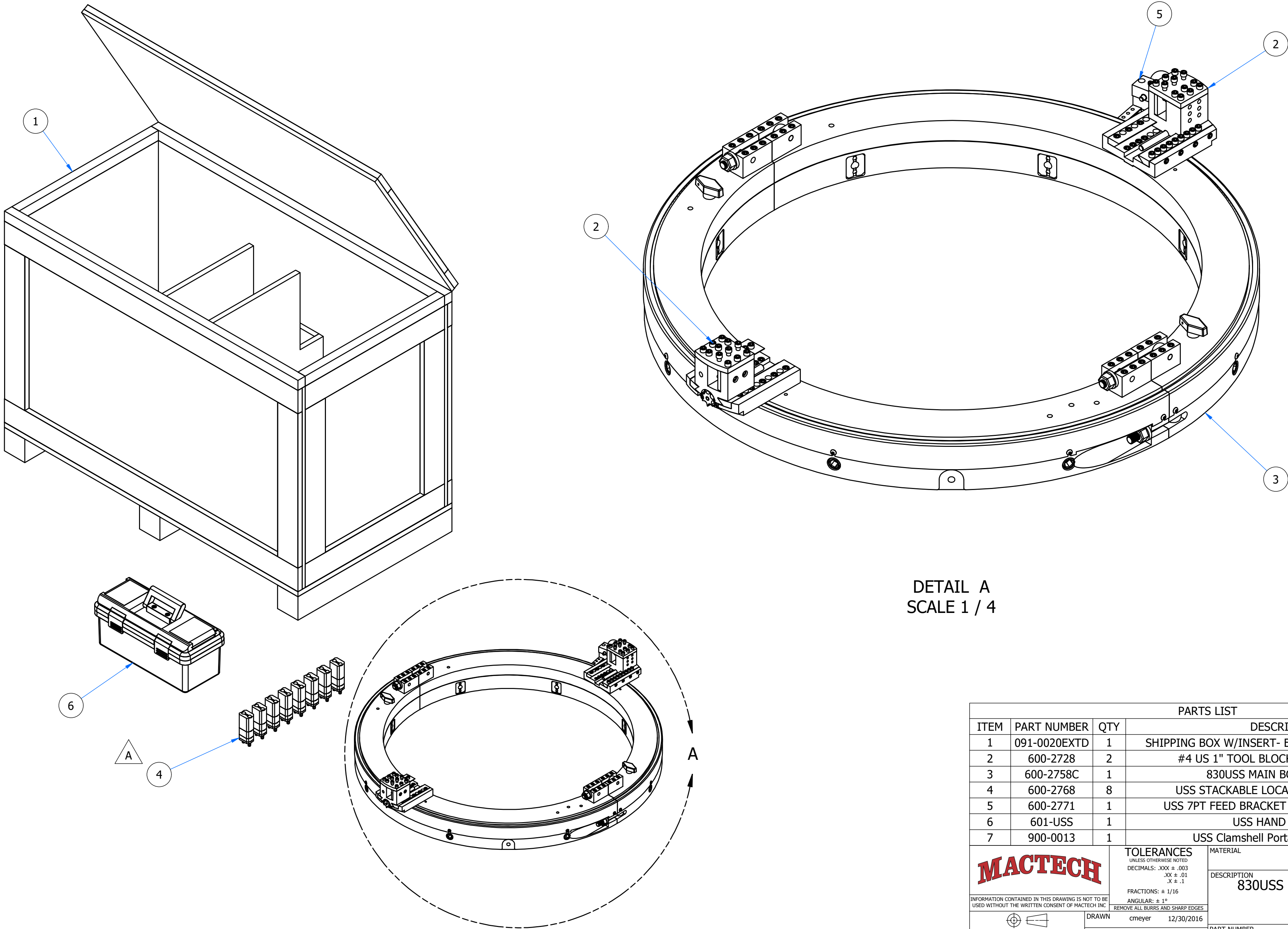
ITEM	PART NUMBER	QTY	DESCRIPTION
1	091-0020EXTD	1	SHIPPING BOX W/INSERT- EXTENDED 50.5 X 26.5 X 35
2	600-2728	2	#4 US 1" TOOL BLOCK & SLIDE ASSEMBLY
3	600-2768-SET8	1	SET OF 8 USS STACKABLE LOCATOR SETS
4	600-2771	1	USS 7PT FEED BRACKET ASSY - 828USS-860USS
5	600-2798C	1	828USS MAIN BODY ASSEMBLY
6	601-USS	1	USS HAND TOOL KIT



MACTECH
ON-SITE MACHINING SOLUTIONS

2/10/2017, REV

REVISIONS				
REV	ECO	DESCRIPTION	DATE	APPROVED
A	#767	REMOVED 600-2768-SET8, ADDED 600-2768	10/17/22	CDM

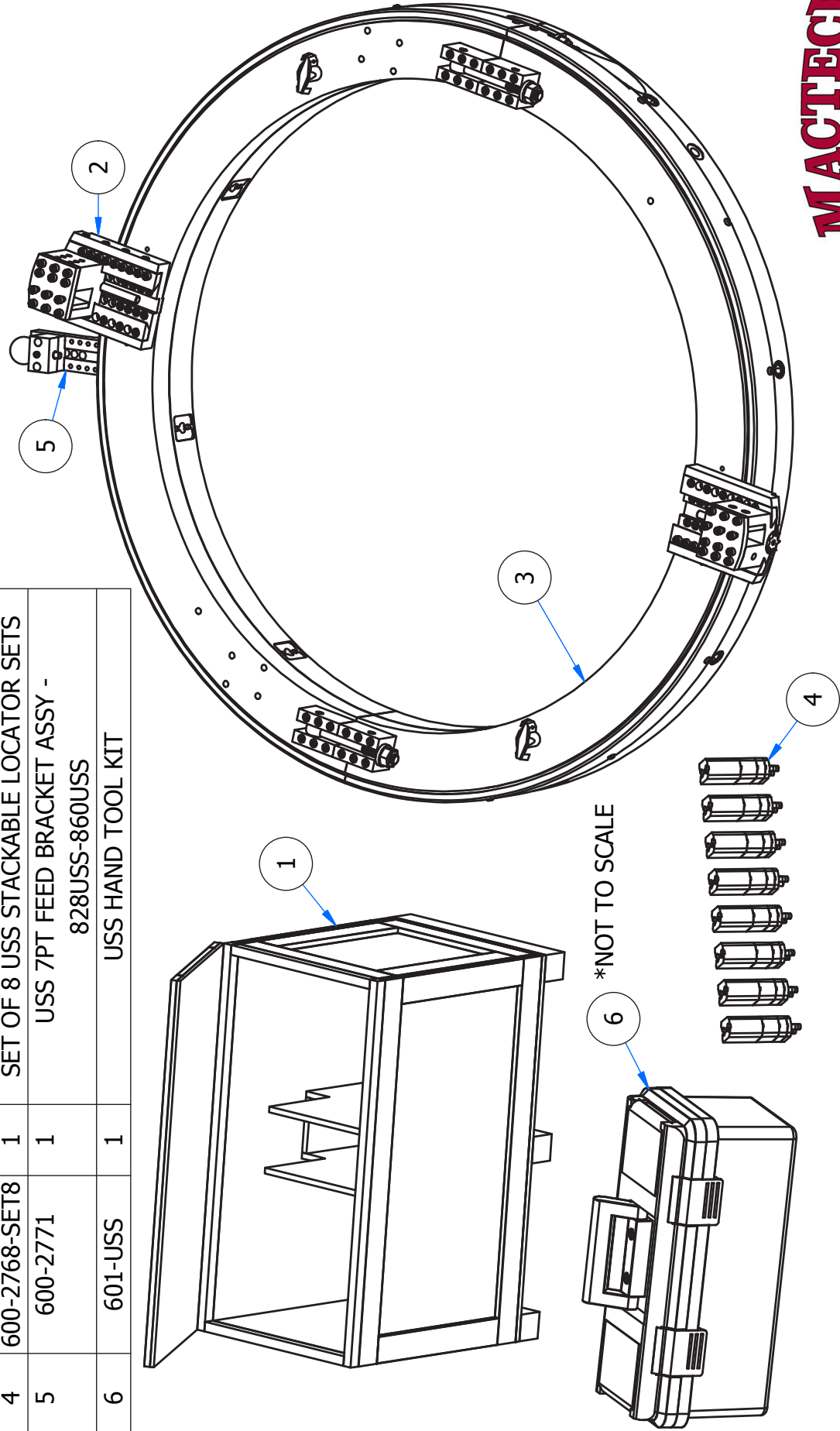


DETAIL A
SCALE 1 / 4

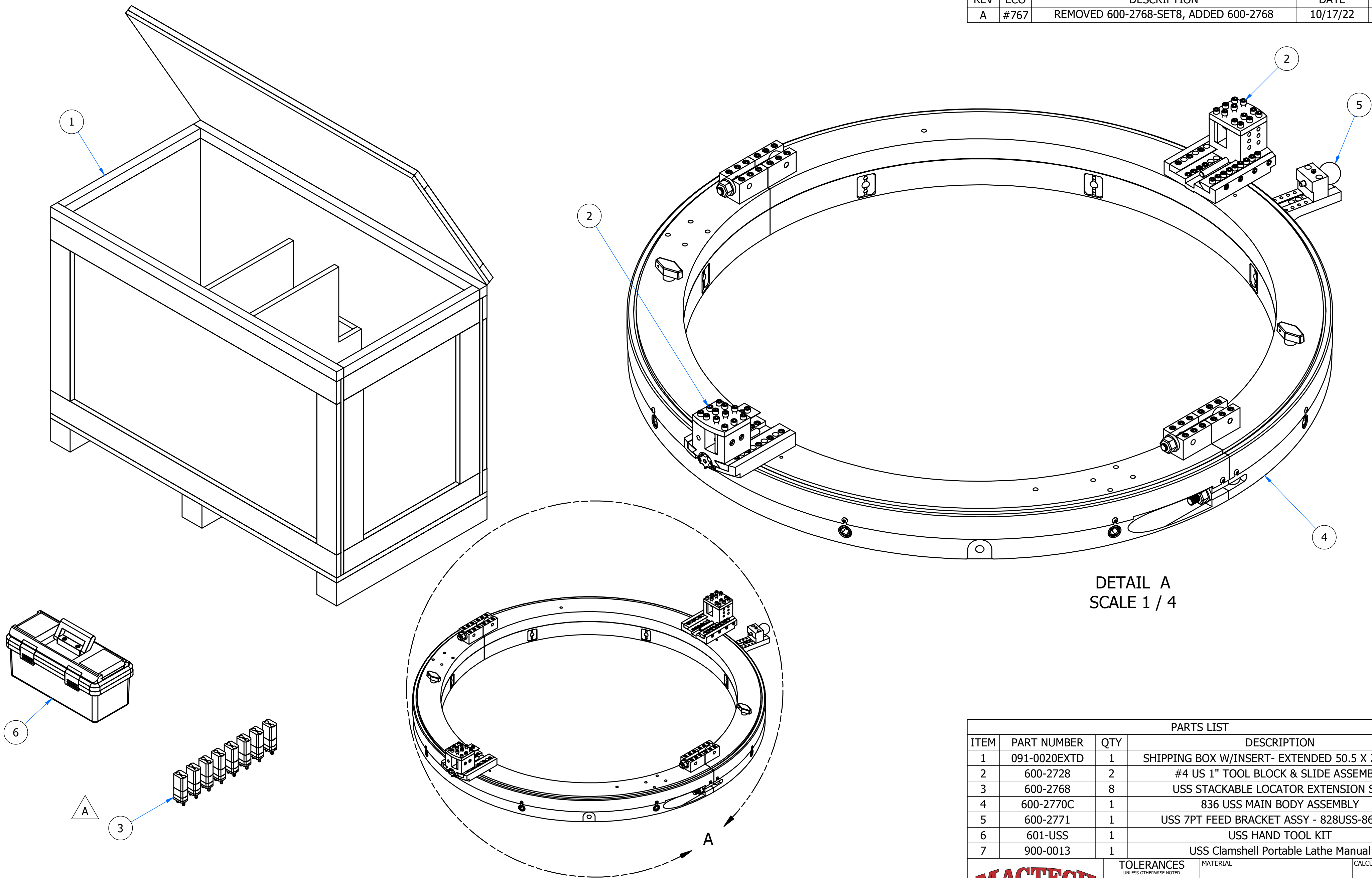
PARTS LIST				
ITEM	PART NUMBER	QTY	DESCRIPTION	
1	091-0020EXTD	1	SHIPPING BOX W/INSERT- EXTENDED 50.5 X 26.5 X 35	
2	600-2728	2	#4 US 1" TOOL BLOCK & SLIDE ASSEMBLY	
3	600-2758C	1	830USS MAIN BODY ASSEMBLY	
4	600-2768	8	USS STACKABLE LOCATOR EXTENSION SET	
5	600-2771	1	USS 7PT FEED BRACKET ASSY - 828USS-860USS	
6	601-USS	1	USS HAND TOOL KIT	
7	900-0013	1	USS Clamshell Portable Lathe Manual	
MACTECH UNLESS OTHERWISE NOTED DECIMALS: .XXX ± .003 .XX ± .01 .X ± .1 FRACTIONS: ± 1/16 ANGULAR: ± 1° REMOVE ALL BURRS AND SHARP EDGES INFORMATION CONTAINED IN THIS DRAWING IS NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF MACTECH INC.		MATERIAL		CALCULATED MASS
		DESCRIPTION		N/A
THIRD ANGLE PROJECTION DRAWN cmeyer 12/30/2016 DESIGNED cmeyer 12/30/2016 FILENAME C:\Vault\Inv Final Drawings\605-605-2758C.idw		PART NUMBER		
		605-2758C		
		SCALE	1/8	SIZE C SHEET 1 OF 1

PARTS LIST			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	091-0020EXTD	1	SHIPPING BOX W/INSERT- EXTENDED 50.5 X 26.5 X 35
2	600-2728	2	#4 US 1" TOOL BLOCK & SLIDE ASSEMBLY
3	600-2759C	1	832USS MAIN BODY ASSEMBLY
4	600-2768-SET8	1	SET OF 8 USS STACKABLE LOCATOR SETS
5	600-2771	1	USS 7PT FEED BRACKET ASSY - 828USS-860USS
6	601-USS	1	USS HAND TOOL KIT

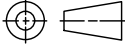
832USS CLAMSHELL PACKAGE 605-2759C



REVISIONS				
REV	ECO	DESCRIPTION	DATE	APPROVED
A	#767	REMOVED 600-2768-SET8, ADDED 600-2768	10/17/22	CDM

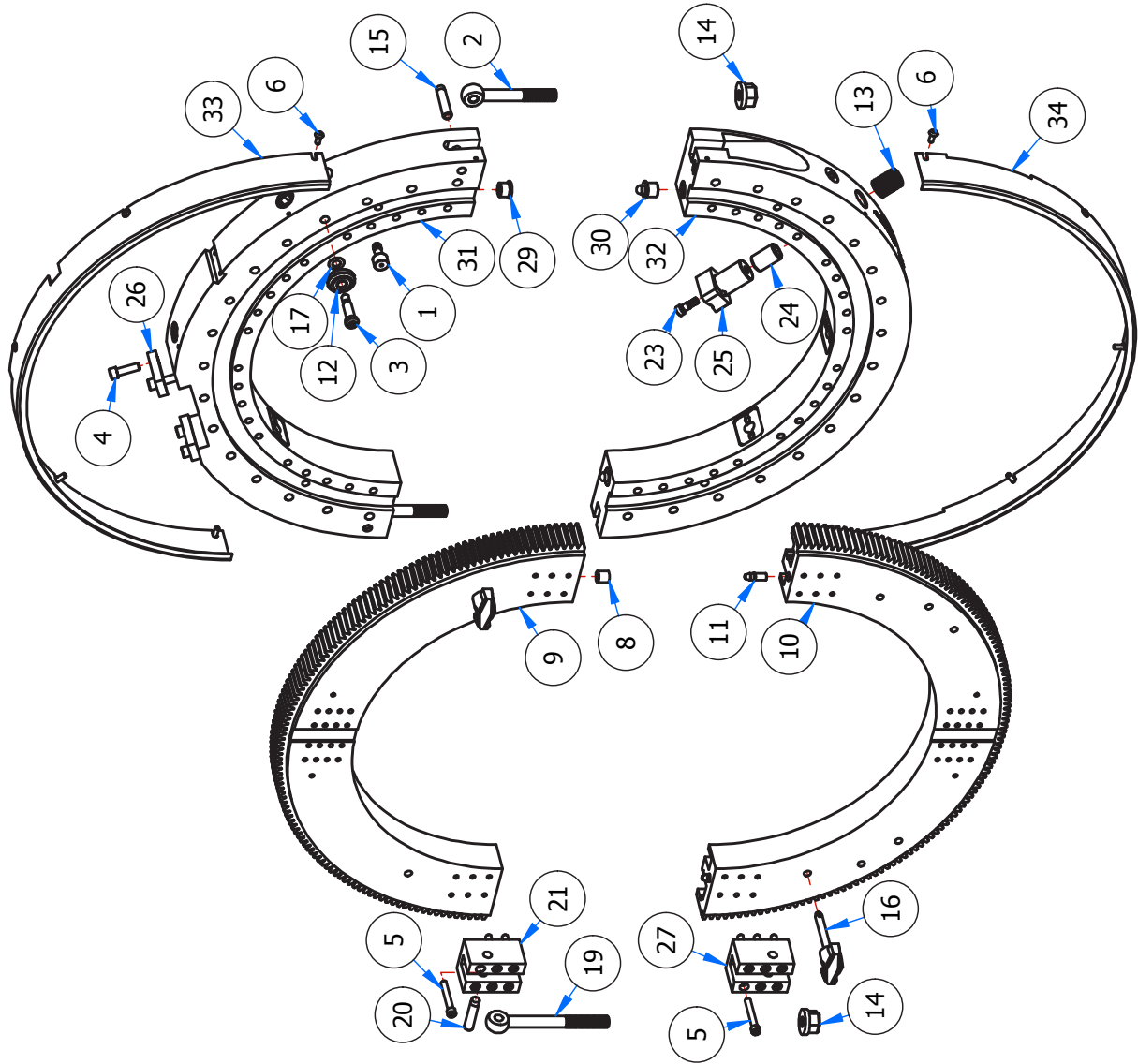


DETAIL A
SCALE 1 / 4

PARTS LIST					
ITEM	PART NUMBER	QTY	DESCRIPTION		
1	091-0020EXTD	1	SHIPPING BOX W/INSERT- EXTENDED 50.5 X 26.5 X 35		
2	600-2728	2	#4 US 1" TOOL BLOCK & SLIDE ASSEMBLY		
3	600-2768	8	USS STACKABLE LOCATOR EXTENSION SET		
4	600-2770C	1	836 USS MAIN BODY ASSEMBLY		
5	600-2771	1	USS 7PT FEED BRACKET ASSY - 828USS-860USS		
6	601-USS	1	USS HAND TOOL KIT		
7	900-0013	1	USS Clamshell Portable Lathe Manual		
MACTECH INFORMATION CONTAINED IN THIS DRAWING IS NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF MACTECH INC.  THIRD ANGLE PROJECTION		TOLERANCES UNLESS OTHERWISE NOTED DECIMALS: .XXX ± .003 .XX ± .01 .X ± .1 FRACTIONS: ± 1/16 ANGULAR: ± 1° REMOVE ALL BURRS AND SHARP EDGES		MATERIAL	CALCULATED MASS N/A
		DRAWN cmeyer 10/17/2022		DESCRIPTION 836USS CLAMSHELL PACKAGE	
				PART NUMBER 605-2770C	
		DESIGNED cmeyer 12/30/2016			
FILENAME C:\Vault\Inv Final Drawings\605-605-2770C.idw			SCALE 1/8	SIZE C	SHEET 1 OF 1

816USS MAIN BODY ASSEMBLY

600-2790C



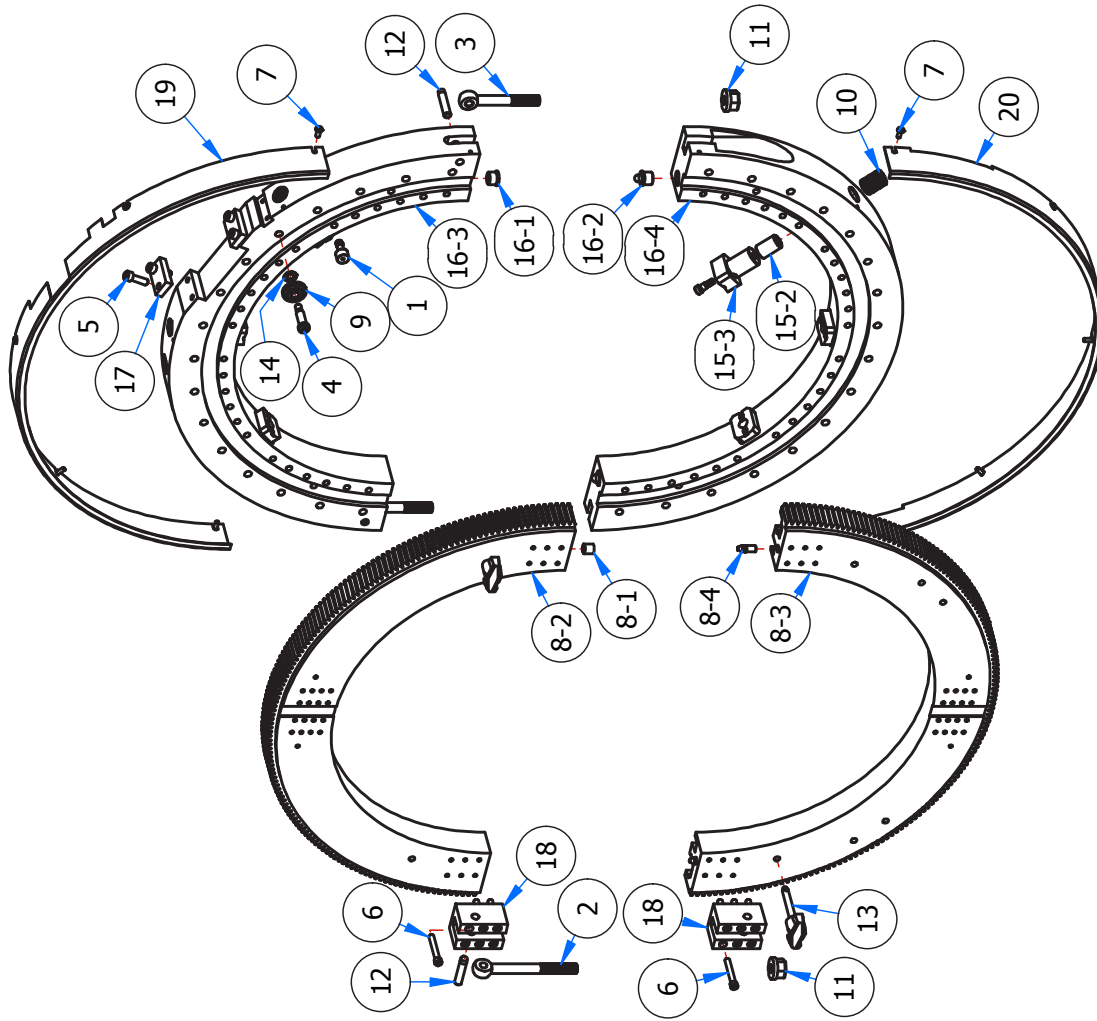
MACTECH
ON-SITE MACHINING SOLUTIONS

PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION
1	020-0120	40	CAM FOLLOWER BEARING - 5/8"
2	030-0013	2	EYE BOLT - 1/2-13 UNC X 3-3/4" LONG - 3/8" DIA HOLE
3	061-0003	32	SHOULDER SCREW, 3/8 x 1", 5/16-18 UNC THDS
4	070-0006	4	SHCS, 5/16-18 x 1
5	070-0011	24	SHCS, 1/4-20 x 1-3/4
6	072-0001	10	BHCS, #10 - 24 x 1/2
7	100-0016C	1	SPLIT GEAR SET - 816USS
8	040-0013	2	BUSHING - 5/16 X 1/2 X 1/2 LONG
9	100-0016C-A	1	SPLIT GEAR SET - 816USS, UPPER HALF
10	100-0016C-B	1	SPLIT GEAR SET - 816USS, LOWER HALF
11	200-0058	2	5/16 BULLET NOSE DOWEL PIN - TEMPERED
12	120-0006	32	GUIDE WHEEL DUA-L-VEE SIZE NO 2 - 1.21 OD X 3/8 ID X .437 THICK
13	120-0065	6	HELICOIL INSERT - 3/4-10 UNC X 1-1/8L
14	170-0006	4	FLANGE NUT - 1/2-13 UNC
15	200-0008	2	PRODUCTION DOWEL PIN - 3/8 x 1 3/4
16	205-0002	2	BALL LOCK PIN - 5/16"
17	480-1002	32	SHIM WASHER - 3/8 X 11/16 X .032
18	600-0458	2	US SWING BOLT ASSEMBLY
19	030-0005	1	EYE BOLT - 1/2-13 UNC X 5 LONG
20	200-0008	1	3/8 x 1 3/4 HARDENED GROUND PRODUCTION DOWEL PIN
21	620-0601	1	US SWING BOLT BRACKET
22	600-2766	6	USS/SLC STACKABLE LOCATOR BASE ASSY
23	061-0002	1	SHOULDER SCREW - 1/4 X 13/16
24	490-0025	1	LOCATOR JACK SCREW
25	620-3941	1	USS/SLC STACKABLE LOCATOR BASE
26	620-0589	2	USS/SLC MOTOR MOUNT BRACKET
27	620-0601	2	US SWING BOLT BRACKET
28	620-3850	1	816US/USS MAIN HOUSING ASSEMBLY
29	040-0002	2	FLANGED BUSHING - BULLET NOSE, 3/8
30	200-0002	2	LOCATING PIN - BULLET NOSE, 3/8
31	620-3850A	1	816US/USS MAIN HOUSING - UPPER HALF
32	620-3850B	1	816US/USS MAIN HOUSING - LOWER HALF
33	630-1050	1	818USS GEAR SHIELD - MOTOR HALF
34	630-1051	1	818USS GEAR SHIELD - HOUSING HALF

820USS MAIN BODY ASSEMBLY

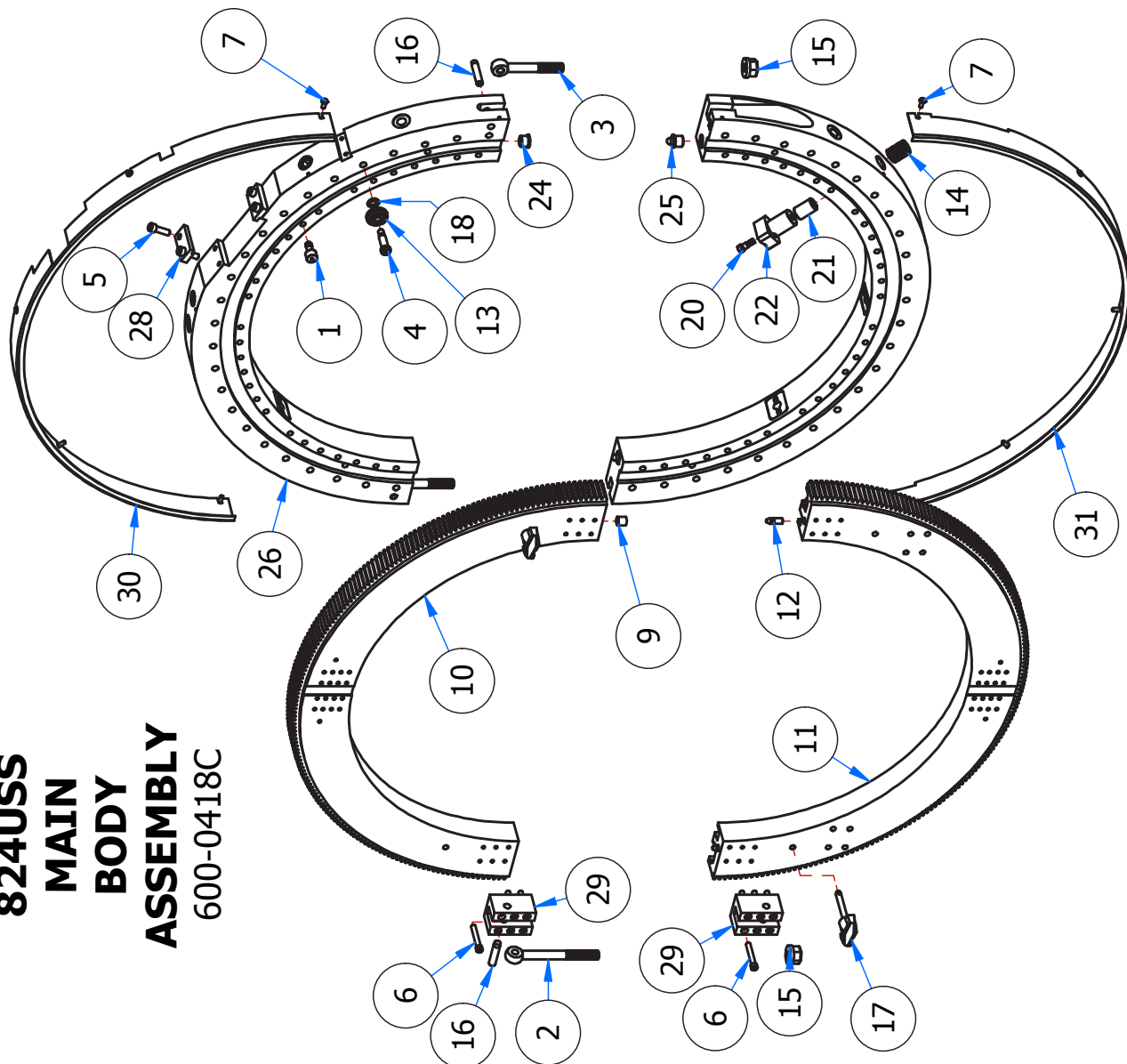
600-0367C



PARTS LIST

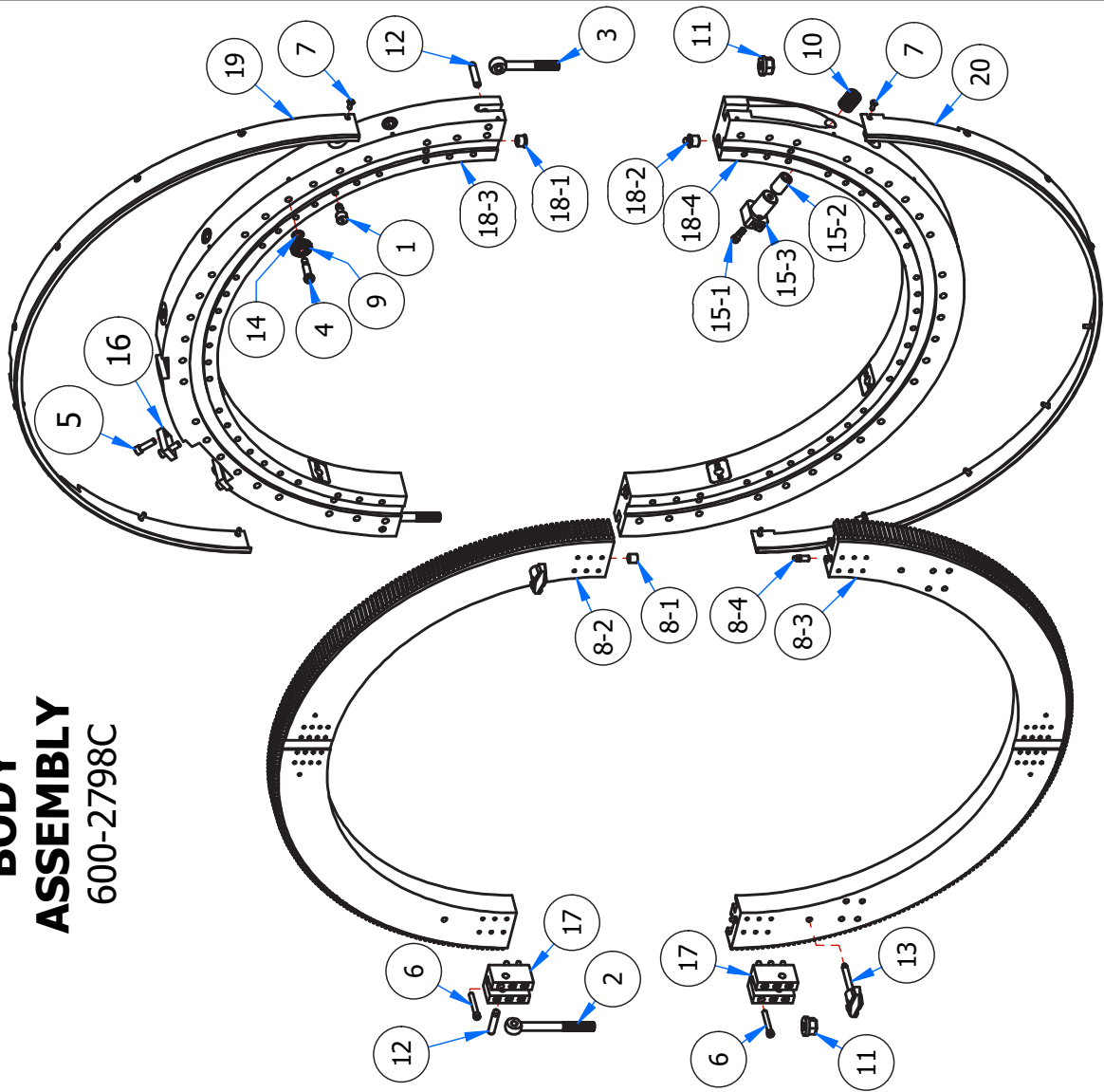
ITEM	PART NUMBER	QTY	DESCRIPTION
1	020-0120	48	CAM FOLLOWER BEARING - 5/8"
2	030-0005	2	EYE BOLT - 1/2-13 UNC X 5 LONG
3	030-0013	2	EYE BOLT - 1/2-13 UNC X 3-3/4" LONG - 3/8" DIA HOLE
4	061-0003	32	SHOULDER SCREW, 3/8 x 1", 5/16-18 UNC THDS
5	070-0006	4	SHCS, 5/16-18 x 1
6	070-0011	24	SHCS, 1/4-20 x 1-3/4
7	072-0001	10	BHCS, #10 - 24 x 1/2
8	100-0023C	1	SPLIT GEAR SET 820US/USS
8-1	040-0013	2	BUSHING - 5/16 X 1/2 X 1/2 LONG
8-2	100-0023C-A	1	SPLIT GEAR SET 820US/USS - UPPER HALF
8-3	100-0023C-B	1	SPLIT GEAR SET 820US/USS - LOWER HALF
8-4	200-0058	2	5/16 BULLET NOSE DOWEL PIN - TEMPERED
9	120-0006	32	GUIDE WHEEL DUA-L-VEE SIZE NO 2 - 1.21 OD X 3/8 ID X .437 THICK
10	120-0065	6	HELICOIL INSERT - 3/4-10 UNC X 1-1/8L
11	170-0006	4	FLANGE NUT - 1/2-13 UNC
12	200-0008	4	PRODUCTION DOWEL PIN - 3/8 x 1 3/4
13	205-0002	2	BALL LOCK PIN - 5/16"
14	480-1002	32	SHIM WASHER - 3/8 X 11/16 X .032
15	600-2766	6	USS/SLC STACKABLE LOCATOR BASE ASSY
15-1	061-0002	1	SHOULDER SCREW - 1/4 X 13/16
15-2	490-0025	1	LOCATOR JACK SCREW
15-3	620-3941	1	USS/SLC STACKABLE LOCATOR BASE
16	620-0530	1	820USS MAIN HOUSING ASSY
16-1	040-0002	2	FLANGED BUSHING - BULLET NOSE, 3/8
16-2	200-0002	2	LOCATING PIN - BULLET NOSE, 3/8
16-3	620-0530A	1	820USS MAIN HOUSING - UPPER HALF
16-4	620-0530B	1	820USS MAIN HOUSING - LOWER HALF
17	620-0589	2	USS/SLC MOTOR MOUNT BRACKET
18	620-0601	4	US SWING BOLT BRACKET
19	630-1220	1	820USS GEAR SHIELD - MOTOR HALF
20	630-1221	1	820USS GEAR SHIELD - HOUSING HALF

824USS MAIN BODY ASSEMBLY 600-0418C



PARTS LIST		
ITEM	PART NUMBER	DESCRIPTION
1	020-0120	CAM FOLLOWER BEARING - 5/8"
2	030-0005	EYE BOLT - 1/2-13 UNC X 5 LONG
3	030-0013	EYE BOLT - 1/2-13 UNC X 3-3/4" LONG - 3/8" DIA HOLE
4	061-0003	SHOULDER SCREW, 3/8 x 1", 5/16-18 UNC THDS
5	070-0006	SHCS, 5/16-18 x 1
6	070-0011	SHCS, 1/4-20 x 1-3/4
7	072-0001	BHCS, #10 - 24 x 1/2
8	100-0018C	SPLIT GEAR SET - 824USS
9	040-0013	BUSHING - 5/16 X 1/2 X 1/2 LONG
10	100-0018C-A	SPLIT GEAR SET - 824USS, UPPER HALF
11	100-0018C-B	SPLIT GEAR SET - 824USS, LOWER HALF
12	200-0058	5/16 BULLET NOSE DOWEL PIN - TEMPERED
13	120-0006	GUIDE WHEEL DUA-L-VEE SIZE NO 2 - 1.21 OD X 3/8 ID X .437 THICK
14	120-0065	HELICOIL INSERT - 3/4-10 UNC X 1-1/8L
15	170-0006	FLANGE NUT - 1/2-13 UNC
16	200-0008	PRODUCTION DOWEL PIN - 3/8 x 1 3/4
17	205-0002	BALL LOCK PIN - 5/16"
18	480-1002	SHIM WASHER - 3/8 X 11/16 X .032
19	600-2766	USS/SLC STACKABLE LOCATOR BASE ASSY
20	061-0002	SHOULDER SCREW - 1/4 X 13/16
21	490-0025	LOCATOR JACK SCREW
22	620-3941	USS/SLC STACKABLE LOCATOR BASE
23	620-0588	824USS MAIN BODY ASSEMBLY
24	040-0002	FLANGED BUSHING - BULLET NOSE, 3/8
25	200-0002	LOCATING PIN - BULLET NOSE, 3/8
26	620-0588A	824USS MAIN BODY - UPPER HALF
27	620-0588B	824USS MAIN BODY - LOWER HALF
28	620-0589 A	824USS MOUNTING CLAMP
29	620-0601	US SWING BOLT BRACKET
30	630-1224	824USS GEAR SHIELD - MOTOR HALF
31	630-1225	824USS GEAR SHIELD - HOUSING HALF

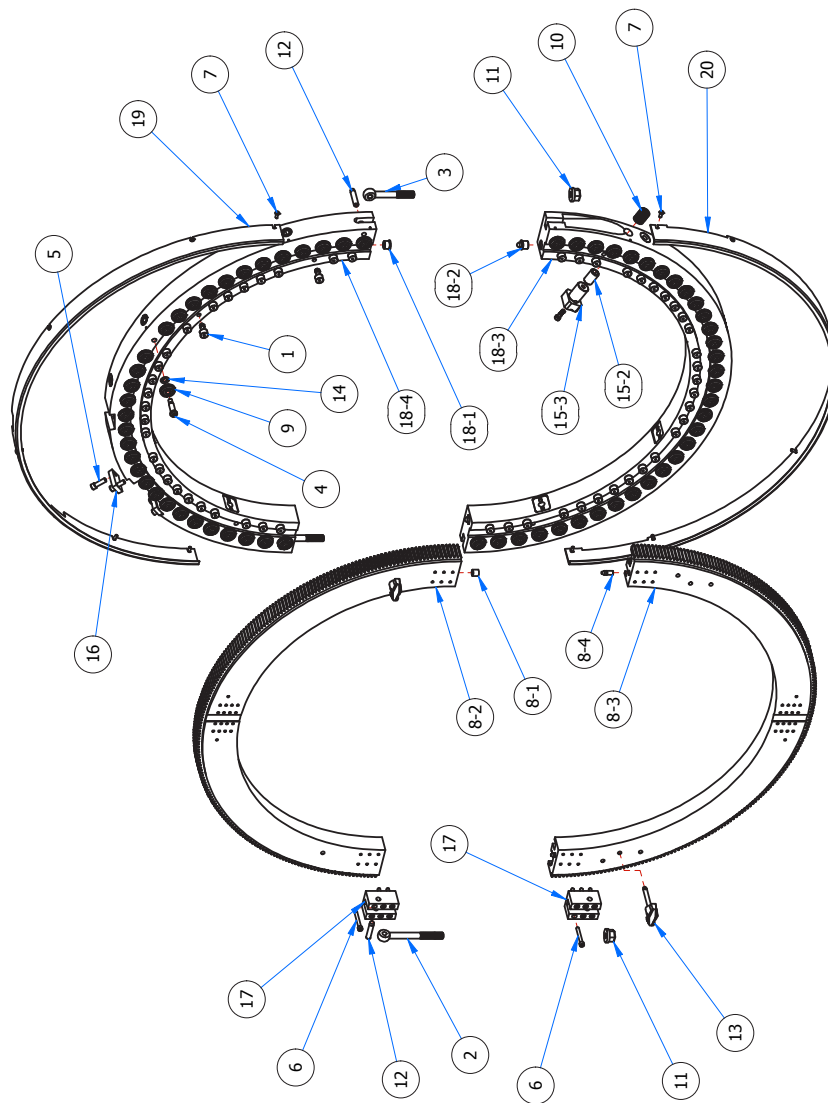
828USS MAIN BODY ASSEMBLY 600-2798C



PARTS LIST			DESCRIPTION
ITEM	PART NUMBER	QTY	DESCRIPTION
1	020-0120	54	CAM FOLLOWER BEARING - 5/8"
2	030-0005	2	EYE BOLT - 1/2-13 UNC X 5 LONG
3	030-0013	2	EYE BOLT - 1/2-13 UNC X 3-3/4" LONG - 3/8" DIA HOLE
4	061-0003	48	SHOULDER SCREW, 3/8 x 1", 5/16-18 UNC THDS
5	070-0006	4	SHCS, 5/16-18 x 1
6	070-0011	24	SHCS, 1/4-20 x 1-3/4
7	072-0001	17	BHCS, #10 - 24 x 1/2
8	100-0128	1	SPLIT GEAR SET - 828USS
8-1	040-0013	2	BUSHING - 5/16 X 1/2 X 1/2 LONG
8-2	100-0128C-A	1	SPLIT GEAR SET - 828USS, UPPER HALF
8-3	100-0128C-B	1	SPLIT GEAR SET - 828USS, LOWER HALF
8-4	200-0058	2	5/16 BULLET NOSE DOWEL PIN - TEMPERED
9	120-0006	48	GUIDE WHEEL DUA-L-VEE SIZE NO 2 - 1.21 OD X 3/8 ID X .437 THICK
10	120-0065	8	HELICOIL INSERT - 3/4-10 UNC X 1-1/8L
11	170-0006	4	FLANGE NUT - 1/2-13 UNC
12	200-0008	4	PRODUCTION DOWEL PIN - 3/8 x 1 3/4
13	205-0002	2	BALL LOCK PIN - 5/16"
14	480-1002	48	SHIM WASHER - 3/8 X 11/16 X .032
15	600-2766	8	USS/SLC STACKABLE LOCATOR BASE ASSY
15-1	061-0002	1	SHOULDER SCREW - 1/4 X 13/16
15-2	490-0025	1	LOCATOR JACK SCREW
15-3	620-3941	1	USS/SLC STACKABLE LOCATOR BASE
16	620-0589	2	USS/SLC MOTOR MOUNT BRACKET
17	620-0601	4	US SWING BOLT BRACKET
18	620-3856	1	828USS HOUSING ASSEMBLY
18-1	040-0002	2	FLANGED BUSHING - BULLET NOSE, 3/8
18-2	200-0002	2	LOCATING PIN - BULLET NOSE, 3/8
18-3	620-3856A	1	828USS HOUSING SET - UPPER HALF
18-4	620-3856B	1	828USS HOUSING SET - LOWER HALF
19	630-1228	1	828USS GEAR SHIELD - MOTOR HALF
20	630-1229	1	828USS GEAR SHIELD - HOUSING HALF

PARTS LIST		
ITEM	PART NUMBER	DESCRIPTION
1	020-0120	CAM FOLLOWER BEARING - 5/8"
2	030-0005	EYE BOLT - 1/2-13 UNC X 5 LONG
3	030-0013	EYE BOLT - 1/2-13 UNC X 3-3/4" LONG - 3/8" DIA HOLE
4	061-0003	SHOULDER SCREW, 3/8 x 1", 5/16-18 UNC THDS
5	070-0006	SHCS, 5/16-18 x 1
6	070-0011	SHCS, 1/4-20 x 1-3/4
7	072-0001	BHCS, #10 - 24 x 1/2
8	100-0245C	830USS SPLIT GEAR SET
8-1	040-0013	BUSHING - 5/16 X 1/2 X 1/2 LONG
8-2	100-0245C-A	830USS SPLIT GEAR SET - UPPER HALF
8-3	100-0245C-B	830USS SPLIT GEAR SET - LOWER HALF
8-4	200-0058	5/16 BULLET NOSE DOWEL PIN - TEMPERED
9	120-0006	GUIDE WHEEL DUAL-VEE SIZE NO 2 - 1.21 OD X 3/8 ID X .437 THICK
10	120-0065	HELICOIL INSERT - 3/4-10 UNC X 1-1/8L
11	170-0006	FLANGE NUT - 1/2-13 UNC
12	200-0008	PRODUCTION DOWEL PIN - 3/8 X 1 3/4
13	205-0002	BALL LOCK PIN - 5/16"
14	480-1002	SHIM WASHER - 3/8 X 11/16 X .032
15	600-2766	USS/SLC STACKABLE LOCATOR BASE ASSY
15-1	061-0002	SHOULDER SCREW - 1/4 X 13/16
15-2	490-0025	LOCATOR JACK SCREW
15-3	620-3941	USS/SLC STACKABLE LOCATOR BASE
16	620-0589	USS/SLC MOTOR MOUNT BRACKET
17	620-0601	US SWING BOLT BRACKET
18	620-3858	830USS HOUSING SET
18-1	040-0002	FLANGED BUSHING - BULLET NOSE, 3/8
18-2	200-0002	LOCATING PIN - BULLET NOSE, 3/8
18-3	620-3856B	830USS HOUSING SET - LOWER HALF
18-4	620-3858A	830USS HOUSING HALF - UPPER HALF
19	630-1230	830USS GEAR SHIELD - MOTOR HALF
20	630-1231	830USS GEAR SHIELD - HOUSING HALF

830USS MAIN BODY ASSEMBLY 600-2758C



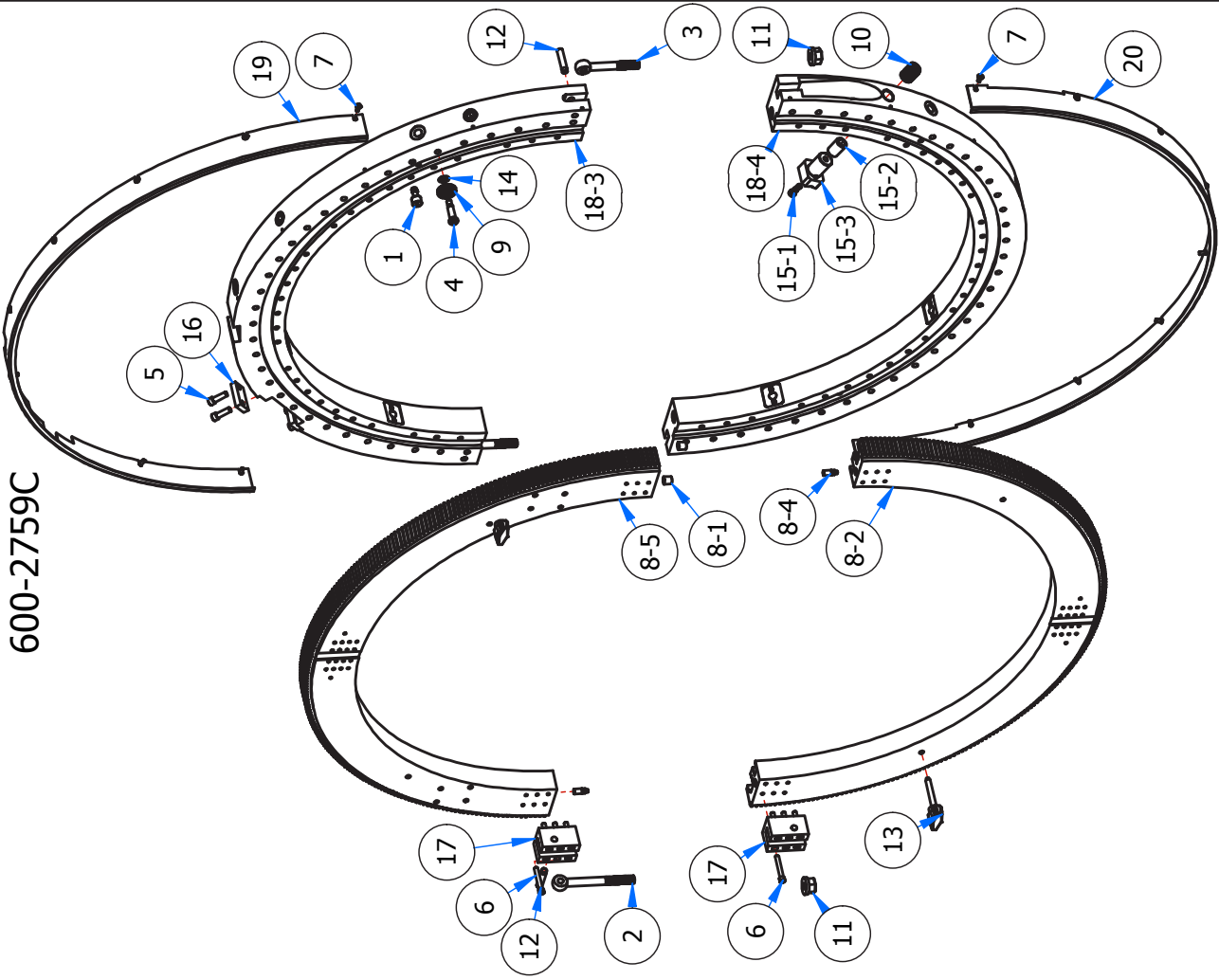
832USS MAIN BODY ASSY

600-2759C



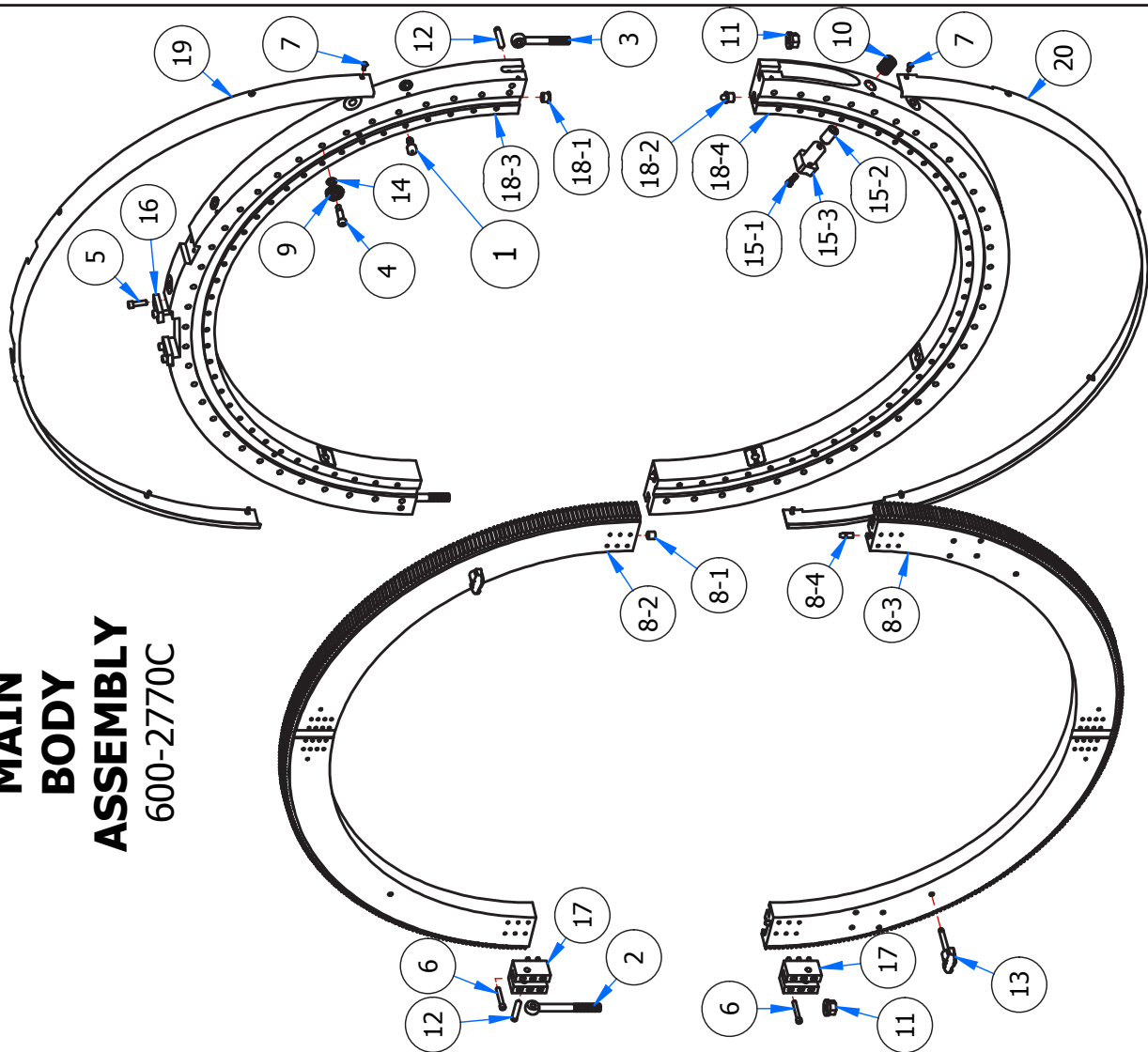
PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION
1	020-0120	54	CAM FOLLOWER BEARING - 5/8"
2	030-0005	2	EYE BOLT - 1/2-13 UNC X 5 LONG
3	030-0013	2	EYE BOLT - 1/2-13 UNC X 3-3/4" LONG - 3/8" DIA HOLE
4	061-0003	64	SHOULDER SCREW, 3/8 x 1", 5/16-18 UNC THDS
5	070-0006	4	SHCS, 5/16-18 x 1
6	070-0011	24	SHCS, 1/4-20 x 1-3/4
7	072-0001	17	BHCS, #10 - 24 x 1/2
8	100-0215C	1	832USS SPLIT GEAR SET
8-1	040-0013	2	BUSHING - 5/16 X 1/2 X 1/2 LONG
8-2	100-0215C-A	1	832USS SPLIT GEAR SET - UPPER HALF
8-4	200-0058	2	5/16 BULLET NOSE DOWEL PIN - TEMPERED
8-5	100-0215C-B	1	832USS SPLIT GEAR SET - LOWER HALF
9	120-0006	64	GUIDE WHEEL DUA-L-VEE SIZE NO 2 - 1.21 OD X 3/8 ID X .437 THICK
10	120-0065	8	HELICOIL INSERT - 3/4-10 UNC X 1-1/8L
11	170-0006	4	FLANGE NUT - 1/2-13 UNC
12	200-0008	4	PRODUCTION DOWEL PIN - 3/8 x 1 3/4
13	205-0002	2	BALL LOCK PIN - 5/16"
14	480-1002	64	SHIM WASHER - 3/8 X 11/16 X .032
15	600-2766	8	USS/SLC STACKABLE LOCATOR BASE ASSY
15-1	061-0002	1	SHOULDER SCREW - 1/4 X 13/16
15-2	490-0025	1	LOCATOR JACK SCREW
15-3	620-3941	1	USS/SLC STACKABLE LOCATOR BASE
16	620-0589	2	USS/SLC MOTOR MOUNT BRACKET
17	620-0601	4	US SWING BOLT BRACKET
18	620-3860	1	832USS MAIN HOUSING
18-3	620-3860A	1	832USS HOUSING - MOTOR HALF
18-4	620-3860B	1	823USS HOUSING - NON-MOTOR HALF
19	630-1232	1	832USS GEAR SHIELD - MOTOR HALF
20	630-1233	1	832USS GEAR SHIELD - HOUSING HALF

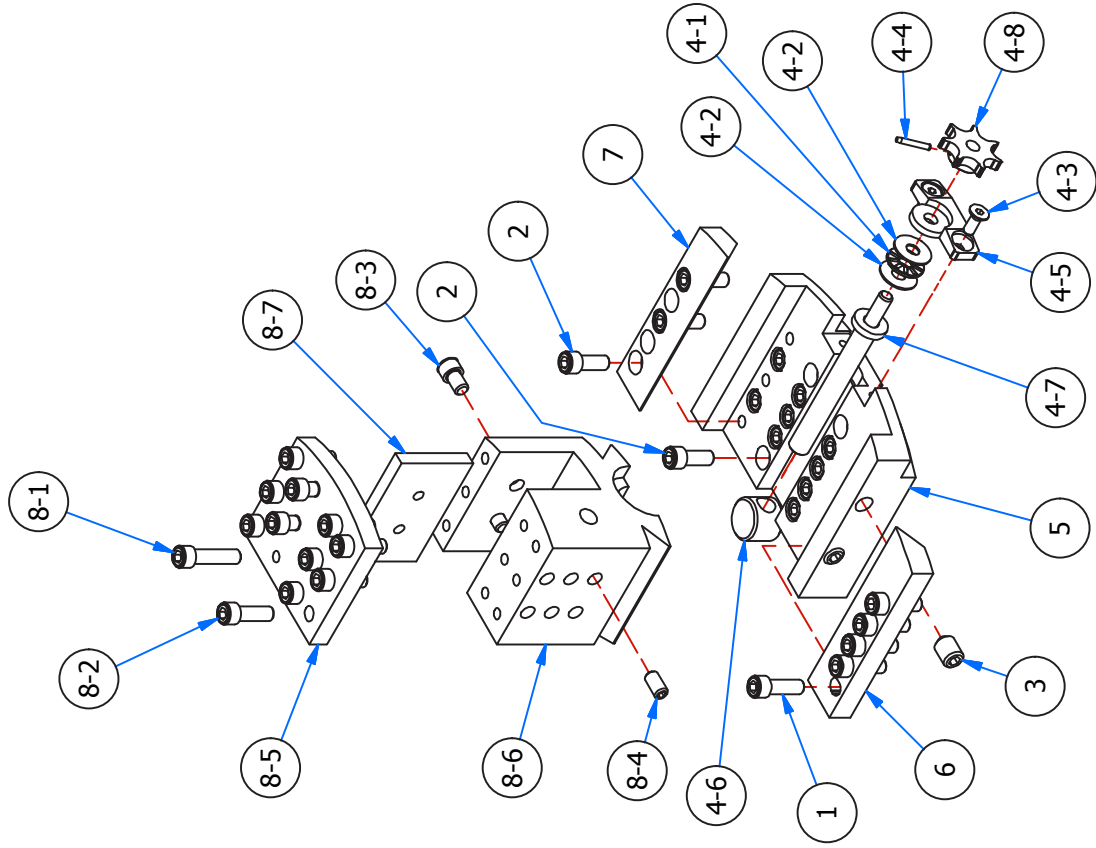


PARTS LIST		
ITEM	PART NUMBER	DESCRIPTION
1	020-0120	70 CAM FOLLOWER BEARING - 5/8"
2	030-0005	2 EYE BOLT - 1/2-13 UNC X 5 LONG
3	030-0013	2 EYE BOLT - 1/2-13 UNC X 3-3/4" LONG - 3/8" DIA HOLE
4	061-0003	64 3/8 x 1 SHOULDER SCREW
5	070-0006	4 5/16 - 18 x 1 SHCS
6	070-0011	24 1/4-20 X 1 3/4 SHCS
7	072-0001	12 10 - 24 x 1/2 BHCS
8	100-0216C	1 836USS SPLIT GEAR SET
8-1	040-0013	2 BUSHING - 5/16 X 1/2 X 1/2 LONG
8-2	100-0216C-A	1 836USS SPLIT GEAR SET - UPPER HALF
8-3	100-0216C-B	1 836USS SPLIT GEAR SET - LOWER HALF
8-4	200-0058	2 5/16 BULLET NOSE DOWEL PIN - TEMPERED
9	120-0006	64 GUIDE WHEEL DUA-L-VEE SIZE NO 2 - 1.21 OD X 3/8 ID X .437 THICK
10	120-0065	8 HELICOIL INSERT - 3/4-10 UNC X 1-1/8L
11	170-0006	4 FLANGE NUT - 1/2-13 UNC
12	200-0008	4 PRODUCTION DOWEL PIN - 3/8 x 1 3/4
13	205-0002	2 BALL LOCK PIN - 5/16"
14	480-1002	64 SHIM WASHER - 3/8 X 1 1/16 X .032
18	620-3870	1 836USS HOUSING ASSEMBLY
18-1	040-0002	2 FLANGED BUSHING - BULLET NOSE, 3/8
18-2	200-0002	2 LOCATING PIN - BULLET NOSE, 3/8
18-3	620-3870A	1 836USS HOUSING ASSEMBLY - UPPER HALF
18-4	620-3870B	1 836USS HOUSING ASSEMBLY - LOWER HALF
15	600-2766	8 USS/SLC STACKABLE LOCATOR BASE ASSY
15-1	061-0002	1 SHOULDER SCREW - 1/4 X 13/16
15-2	490-0025	1 LOCATOR JACK SCREW
15-3	620-3941	1 USS/SLC STACKABLE LOCATOR BASE
16	620-0589	2 USS/SLC MOTOR MOUNT BRACKET
17	620-0601	4 US SWING BOLT BRACKET
19	630-1236	1 836USS GEAR SHIELD - MOTOR HALF
20	630-1237	1 836USS GEAR SHIELD - HOUSING HALF

836 USS MAIN BODY ASSEMBLY 600-2770C



#2 US 1" TOOL BLOCK & SLIDE ASSEMBLY 600-2726



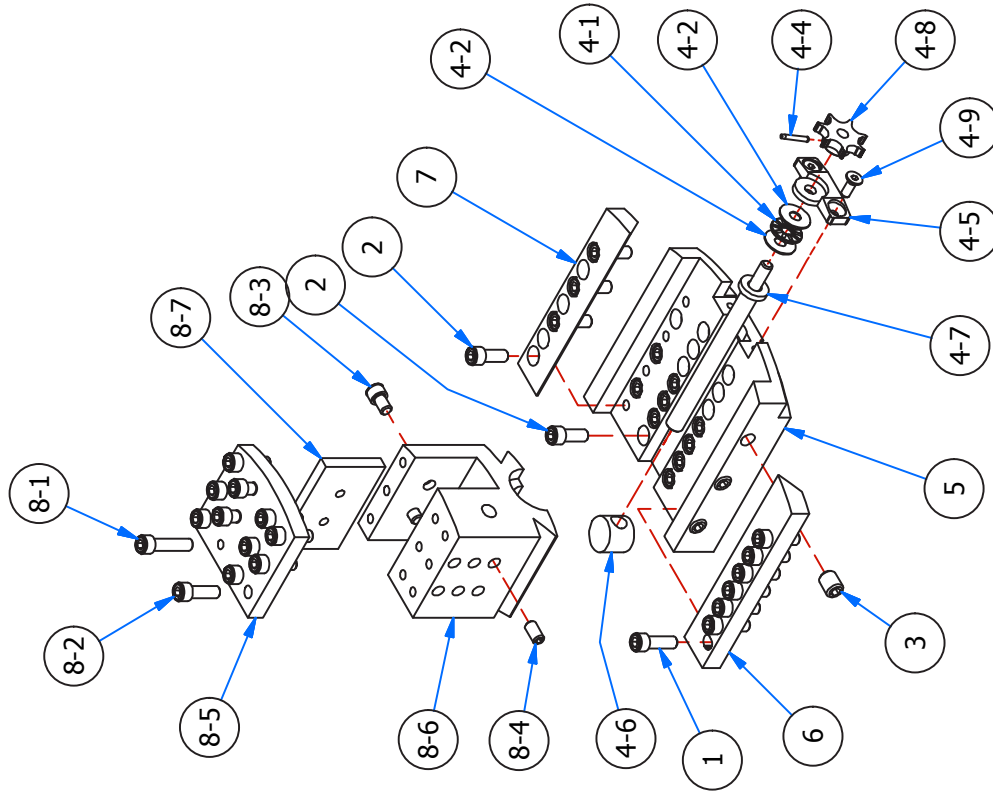
PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION	VENDOR
1	070-0004	5	SHCS, 1/4-20 x 3/4	PURCHASED
2	070-0010	13	SHCS, 1/4-20 x 5/8	PURCHASED
3	340-0013	2	SSS, CUP POINT - 3/8-16 UNC x 1/2"	PURCHASED
4	460-0036	1	FEED SCREW ASSEMBLY - #2 3/8-40 UNS RH - 7 PT	MACTECH
4-1	020-0041 BEARING	1	NEEDLE THRUST BEARING - 1/4 X 11/16	PURCHASED
4-2	020-0041-031 WASHER	2	NEEDLE THRUST BEARING RACE - 1/4 X 11/16 X 1/32T	PURCHASED
4-3	071-0004	2	FHCS, #10-32 x 1/2	PURCHASED
4-4	200-0019	1	3/32 x 5/8 HARDENED GROUND PRODUCTION DOWEL PIN	PURCHASED
4-5	460-0015	1	FEED SCREW ENDPLATE - 7PT.	MACTECH
4-6	460-0019	1	FEED NUT - 3/8-40 UNS RH	MACTECH
4-7	460-0028	1	FEED SCREW - #2 3/8-40 UNS RH	MACTECH
4-8	460-0330	1	STAR WHEEL - 7PT	MACTECH
5	460-0620	1	#2 X 3/4 TOOL SLIDE	MACTECH
6	460-0621	1	#2 GIB - ADJUSTABLE	MACTECH
7	460-0622	1	#2 GIB - NON-ADJUSTABLE	MACTECH
8	600-0045	1	US TOOL BLOCK ASSEMBLY - 1" SLOT	MACTECH
8-1	070-0003	3	SHCS, 1/4-20 x 1	PURCHASED
8-2	070-0004	9	SHCS, 1/4-20 x 3/4	PURCHASED
8-3	070-0033	2	SHCS, 1/4-20 x 3/8	PURCHASED
8-4	340-0001	6	SSS, CUP POINT - 1/4-20 UNC x 1/2	PURCHASED
8-5	460-0346	1	CAP - US TOOL BLOCK - 1" SLOT	MACTECH
8-6	460-0347	1	TOOL BLOCK - 1" SLOT - US - 820 AFO	MACTECH
8-7	460-0348	1	SHIM - TOOL BLOCK WIDTH - US - 820 AFO	MACTECH

*1" SHIM SET: PN 600-0380

*3/4" SHIM SET: PN 600-0349

#3 US 1" TOOL BLOCK & SLIDE ASSEMBLY 600-2727



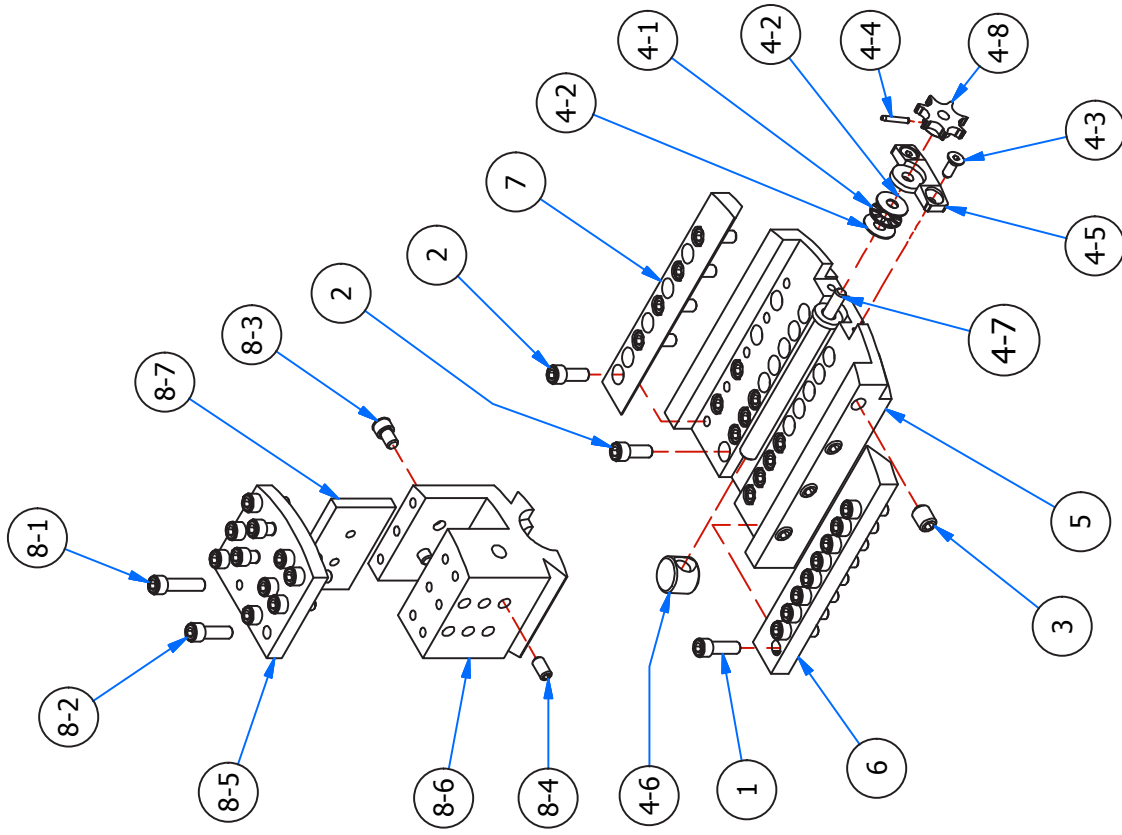
PARTS LIST				
ITEM	PART NUMBER	QTY	DESCRIPTION	VENDOR
1	070-0004	7	SHCS, 1/4-20 x 3/4	PURCHASED
2	070-0010	14	SHCS, 1/4-20 x 5/8	PURCHASED
3	340-0013	3	SSS, CUP POINT - 3/8-16 UNC x 1/2"	PURCHASED
4	460-0037	1	#3-#4 3/8-40 RH US FEED SCREW ASSEMBLY - 7 PT (.004 PER TRIP)	MACTECH
4-1	020-0041	1	1/4" THRUST BEARING CAGE	PURCHASED
4-2	020-0041-031	2	1/4" X .031 THRUST WASHER	MACTECH
4-4	200-0019	1	3/32 x 5/8 HARDENED GROUND PRODUCTION DOWEL PIN	PURCHASED
4-5	460-0015	1	FEED SCREW ENDPLATE - 7PT.	MACTECH
4-6	460-0019	1	3/8-40 RH FEED NUT	MACTECH
4-7	460-0042	1	FEED SCREW - #3-#4 3/8-40 UNS RH	MACTECH
4-8	460-0330	1	7 PT. STAR WHEEL	MACTECH
4-9	071-0004	2	FHCS, #10-32 x 1/2	PURCHASED
5	460-0625	1	#3 X 3/4 TOOL BLOCK SLIDE	MACTECH
6	460-0626	1	#3 GIB - ADJUSTABLE	MACTECH
7	460-0627	1	#3 GIB - FIXED	MACTECH
8	600-0045	1	US TOOL BLOCK ASSEMBLY - 1" SLOT	MACTECH
8-1	070-0003	3	SHCS, 1/4-20 x 1	PURCHASED
8-2	070-0004	9	SHCS, 1/4-20 x 3/4	PURCHASED
8-3	070-0033	2	SHCS, 1/4-20 x 3/8	PURCHASED
8-4	340-0001	6	SSS, CUP POINT - 1/4-20 UNC x 1/2	PURCHASED
8-5	460-0346	1	CAP - US TOOL BLOCK - 1" SLOT	MACTECH
8-6	460-0347	1	TOOL BLOCK - 1" SLOT - US - 820 AFO	MACTECH
8-7	460-0348	1	SHIM - TOOL BLOCK WIDTH - US - 820 AFO	MACTECH

*1" SHIM SET: PN 600-0380

*3/4" SHIM SET: PN 600-0349

3/31/2016

#4 US 1" TOOL BLOCK & SLIDE ASSEMBLY 600-2728



PARTS LIST

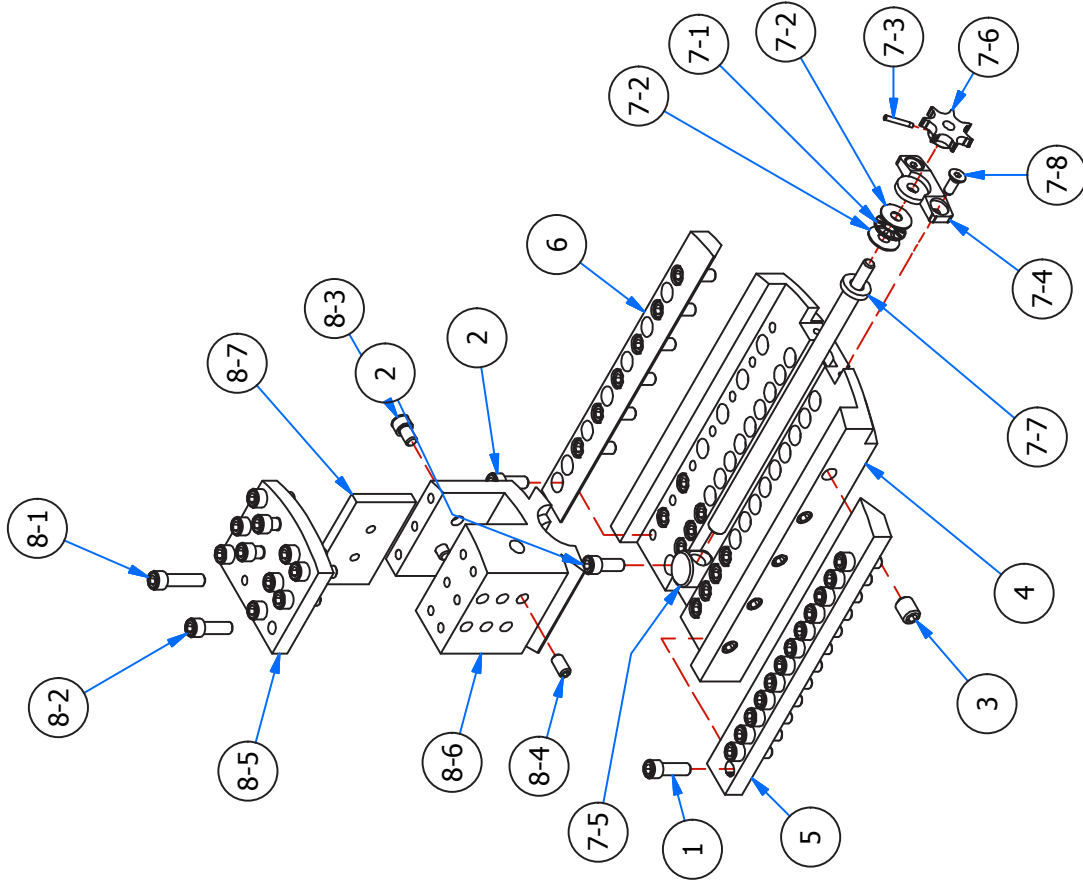
ITEM	PART NUMBER	QTY	DESCRIPTION	VENDOR
1	070-0004	9	SHCS, 1/4-20 x 3/4	PURCHASED
2	070-0010	15	SHCS, 1/4-20 x 5/8	PURCHASED
3	340-0013	4	SSS, CUP POINT - 3/8-16 UNC x 1/2"	PURCHASED
4	460-0037	1	#3-#4 3/8-40 RH US FEED SCREW ASSEMBLY - 7 PT (.004 PER TRIP)	MACTECH
4-1	020-0041	1	1/4" THRUST BEARING CAGE	PURCHASED
4-2	020-0041-031	2	1/4" X .031 THRUST WASHER	MACTECH
4-3	071-0004	2	FHCS, #10-32 x 1/2	PURCHASED
4-4	200-0019	1	3/32 x 5/8 HARDENED GROUND PRODUCTION DOWEL PIN	PURCHASED
4-5	460-0015	1	FEED SCREW ENDPLATE - 7PT.	MACTECH
4-6	460-0019	1	3/8-40 RH FEED NUT	MACTECH
4-7	460-0042	1	FEED SCREW - #3-#4 3/8-40 UNS RH	MACTECH
4-8	460-0330	1	7 PT. STAR WHEEL	MACTECH
5	460-0642	1	TOOL BLOCK SLIDE - #4 X 3/4	MACTECH
6	460-0643	1	#4 GIB - ADJUSTABLE	MACTECH
7	460-0644	1	#4 GIB - FIXED	MACTECH
8	600-0045	1	US TOOL BLOCK ASSEMBLY - 1" SLOT	MACTECH
8-1	070-0003	3	SHCS, 1/4-20 x 1	PURCHASED
8-2	070-0004	9	SHCS, 1/4-20 x 3/4	PURCHASED
8-3	070-0033	2	SHCS, 1/4-20 x 3/8	PURCHASED
8-4	340-0001	6	SSS, CUP POINT - 1/4-20 UNC x 1/2	PURCHASED
8-5	460-0346	1	CAP - US TOOL BLOCK - 1" SLOT	MACTECH
8-6	460-0347	1	US TOOL BLOCK - 1" SLOT	MACTECH
8-7	460-0348	1	US TOOL BLOCK SHIM - 1" TO 3/4"	MACTECH

*1" SHIM SET: PN 600-0380

* 3/4" SHIM SET: PN 600-0349

2/1/2017

#6 US 1" TOOL BLOCK & SLIDE ASSEMBLY 600-2723



PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION
1	070-0004	13	SHCS, 1/4-20 x 3/4
2	070-0010	17	SHCS, 1/4-20 x 5/8
3	340-0013	5	3/8-16 x 1/2 SSS-CUP POINT
4	460-0690	1	#6 US TOOL BLOCK SLIDE
5	460-0691	1	#6 US GIB - ADJUSTABLE
6	460-0692	1	#6 US GIB - FIXED
7	460-0700	1	#6 3/8-40 RH US FEED SCREW ASSEMBLY - 7 PT (.004 PER TRIP)
7-1	020-0041 BEARING	1	1/4" THRUST BEARING CAGE
7-2	020-0041-031 WASHER	2	1/4" X .031 THRUST WASHER
7-3	200-0019	1	3/32 x 5/8 HARDENED GROUND PRODUCTION DOWEL PIN
7-4	460-0015	1	FEED SCREW ENDPLATE - 7PT.
7-5	460-0019	1	3/8-40 RH FEED NUT
7-6	460-0330	1	7 PT. STAR WHEEL
7-7	460-0693	1	#6 3/8-40 RH FEED SCREW
7-8	071-0004	2	FHCS, #10-32 x 1/2
8	600-0045	1	US TOOL BLOCK ASSEMBLY - 1" SLOT
8-1	070-0003	3	SHCS, 1/4-20 x 1
8-2	070-0004	9	SHCS, 1/4-20 x 3/4
8-3	070-0033	2	SHCS, 1/4-20 x 3/8
8-4	340-0001	6	SSS, CUP POINT - 1/4-20 UNC x 1/2
8-5	460-0346	1	CAP - US TOOL BLOCK - 1" SLOT
8-6	460-0347	1	US TOOL BLOCK - 1" SLOT
8-7	460-0348	1	US TOOL BLOCK SHIM - 1" TO 3/4"

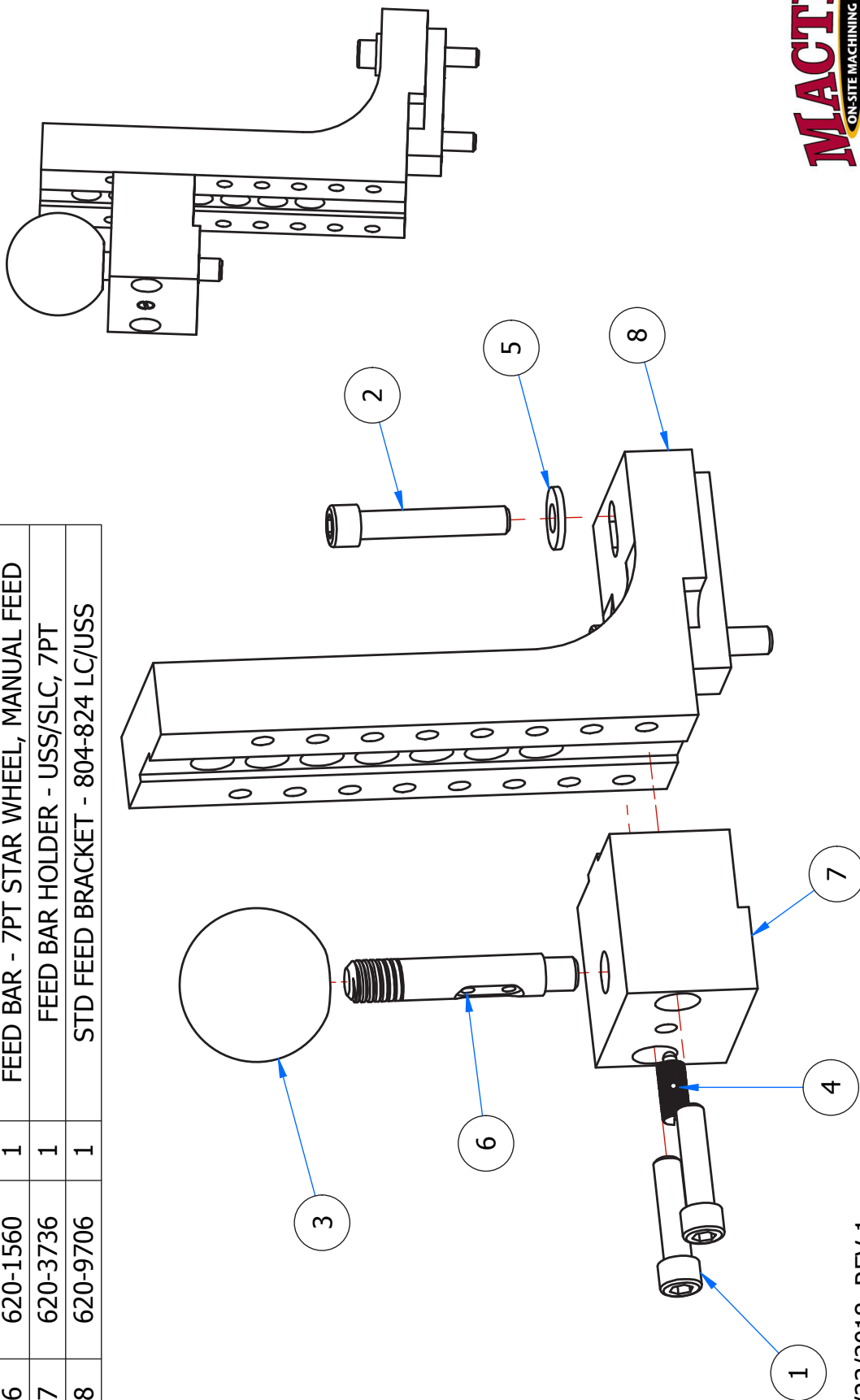
* 1" SHIM SET: PN 600-0380

* 3/4" SHIM SET: PN 600-0349

STD USS 7PT FEED BRACKET ASSY - 816-824 600-6760

PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION
1	070-0003	2	SHCS, 1/4-20 x 1
2	070-0385	2	SHCS, 1/4-20 x 1-3/8
3	120-0003	1	PLASTIC KNOB - 1-3/8 DIA, 3/8-16 UNC
4	120-0028	1	SPRING PLUNGER - 1/4-20
5	480-1014	2	WASHER - .255 X .56 X .062 THK
6	620-1560	1	FEED BAR - 7PT STAR WHEEL, MANUAL FEED
7	620-3736	1	FEED BAR HOLDER - USS/SLC, 7PT
8	620-9706	1	STD FEED BRACKET - 804-824 LC/USS

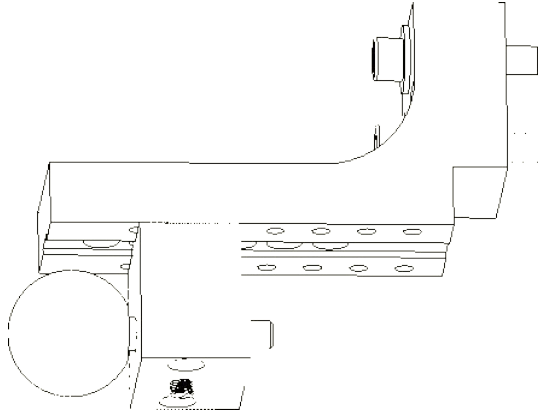
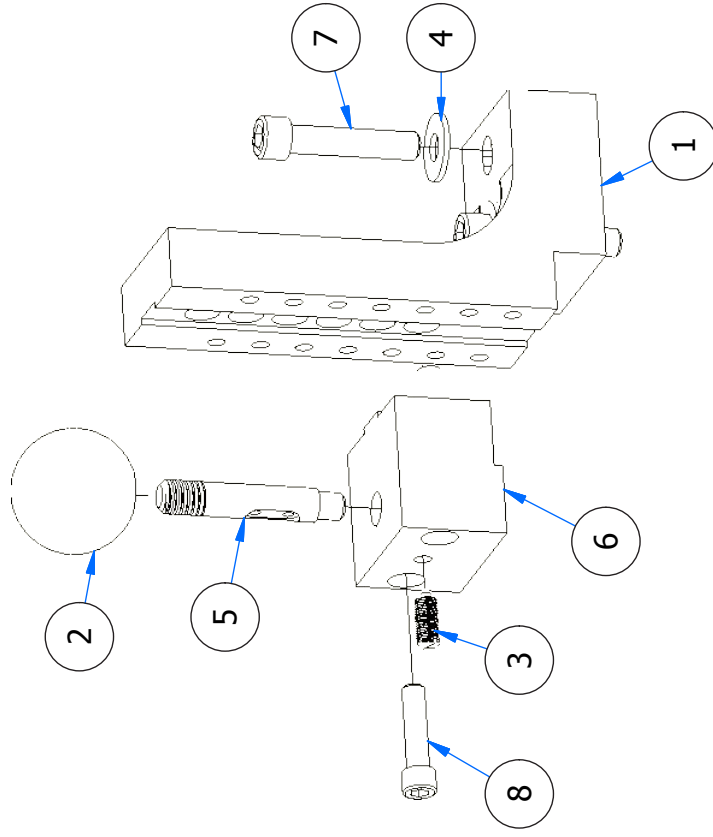


PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION
1	620-3845	1	UNIVERSAL FEED BRACKET - 828-860 USS-WD
2	120-0003	1	PLASTIC KNOB - 1-3/8 DIA, 3/8-16 UNC
3	120-0028	1	SPRING PLUNGER - 1/4-20
4	480-1070	2	USS 1/4" TYPE A, WIDE HARDENED WASHER
5	620-1560	1	FEED BAR - 7PT STAR WHEEL, MANUAL FEED
6	620-3736	1	FEED BAR HOLDER - USS/SLC, 7PT
7	070-0013	2	SHCS, 5/16-18 x 1-1/2
8	070-0003	2	SHCS, 1/4-20 x 1

USS 7PT FEED BRACKET ASSY - 828USS-860USS

600-2771



PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION
1	070-0006	2	SHCS, 5/16-18 x 1
2	070-0007	2	SHCS, 5/16-18 x 1-1/4
3	070-0013	2	SHCS, 5/16-18 x 1-1/2
4	070-0032	2	SHCS, 5/16-18 x 3/4
5	620-3942	1	1/4" LOCATOR EXTENSION, LC/USS
6	620-3943	1	1/2" LOCATOR EXTENSION, LC/USS
7	620-3944	1	1" LOCATOR EXTENSION, LC/USS
8	620-3946	1	2" LOCATOR EXTENSION, LC/USS

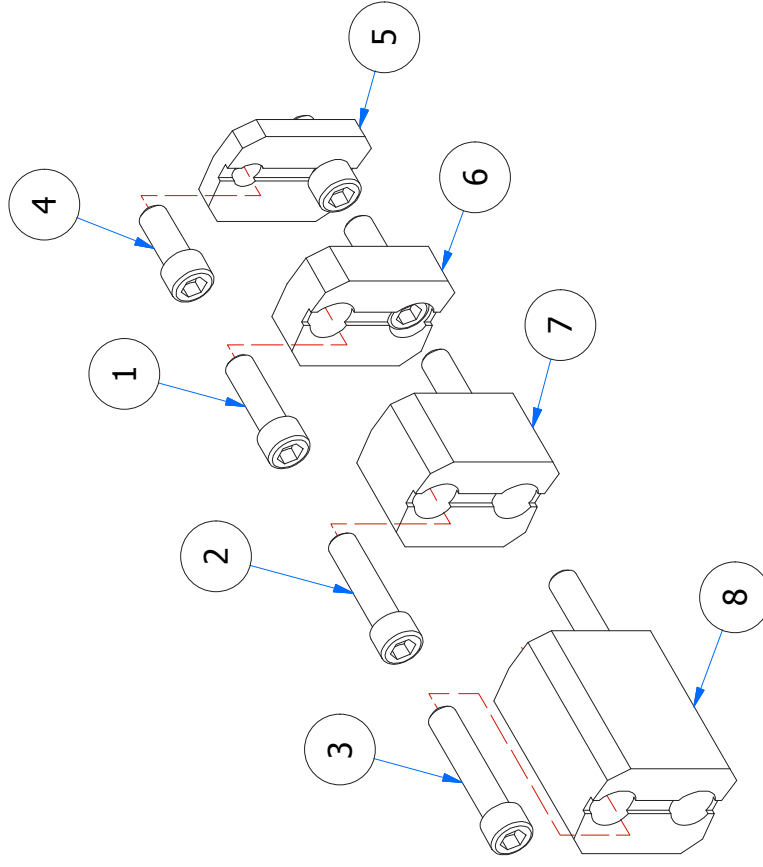
FOR CLAMSHELLS 814USS - 824USS
PN: "600-2768 SET-6" IS NEEDED

FOR CLAMSHELLS 828USS - 848USS
PN: "600-2768 SET-8" IS NEEDED

ACCESSORIES:

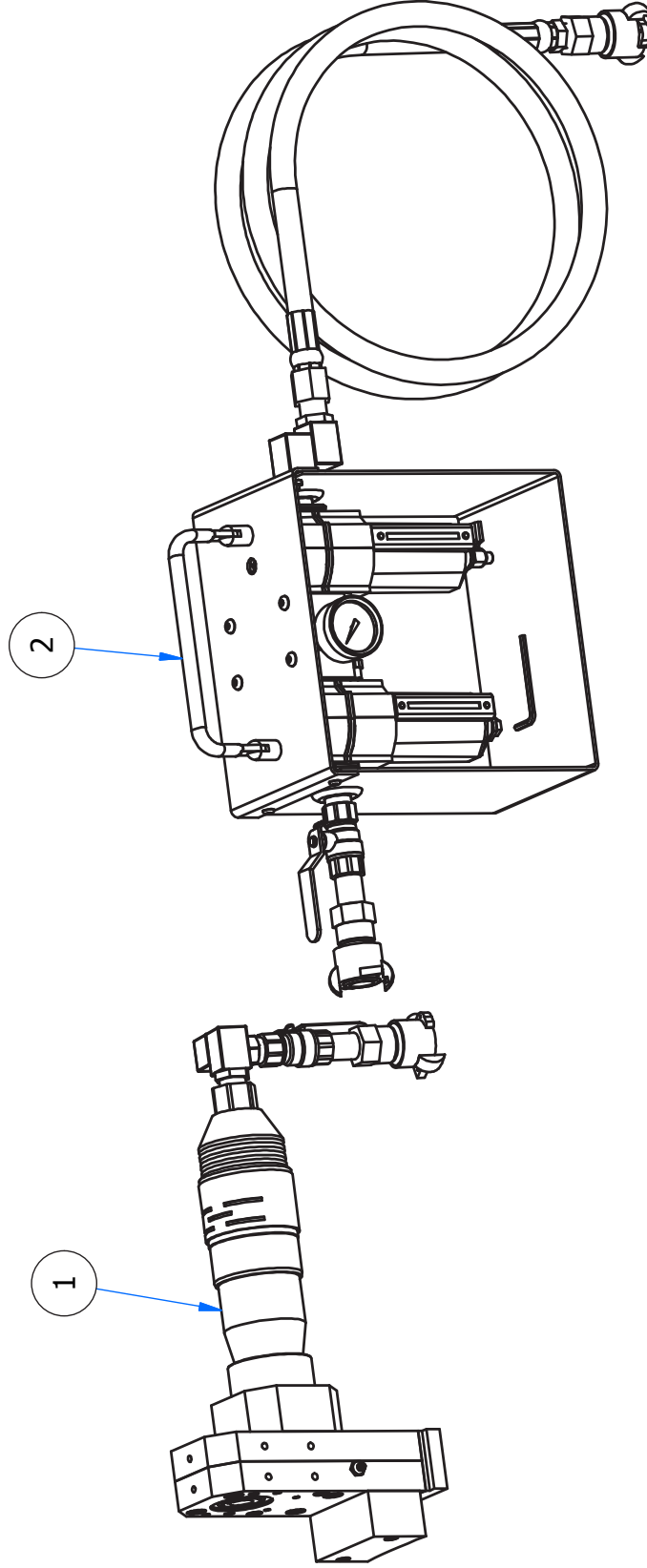
1-1/2" EXTENSION 620-3945
2-1/2" EXTENSION 620-3947
3" EXTENSION 620-3948

USS STACKABLE LOCATOR EXTENSION SET 600-2768

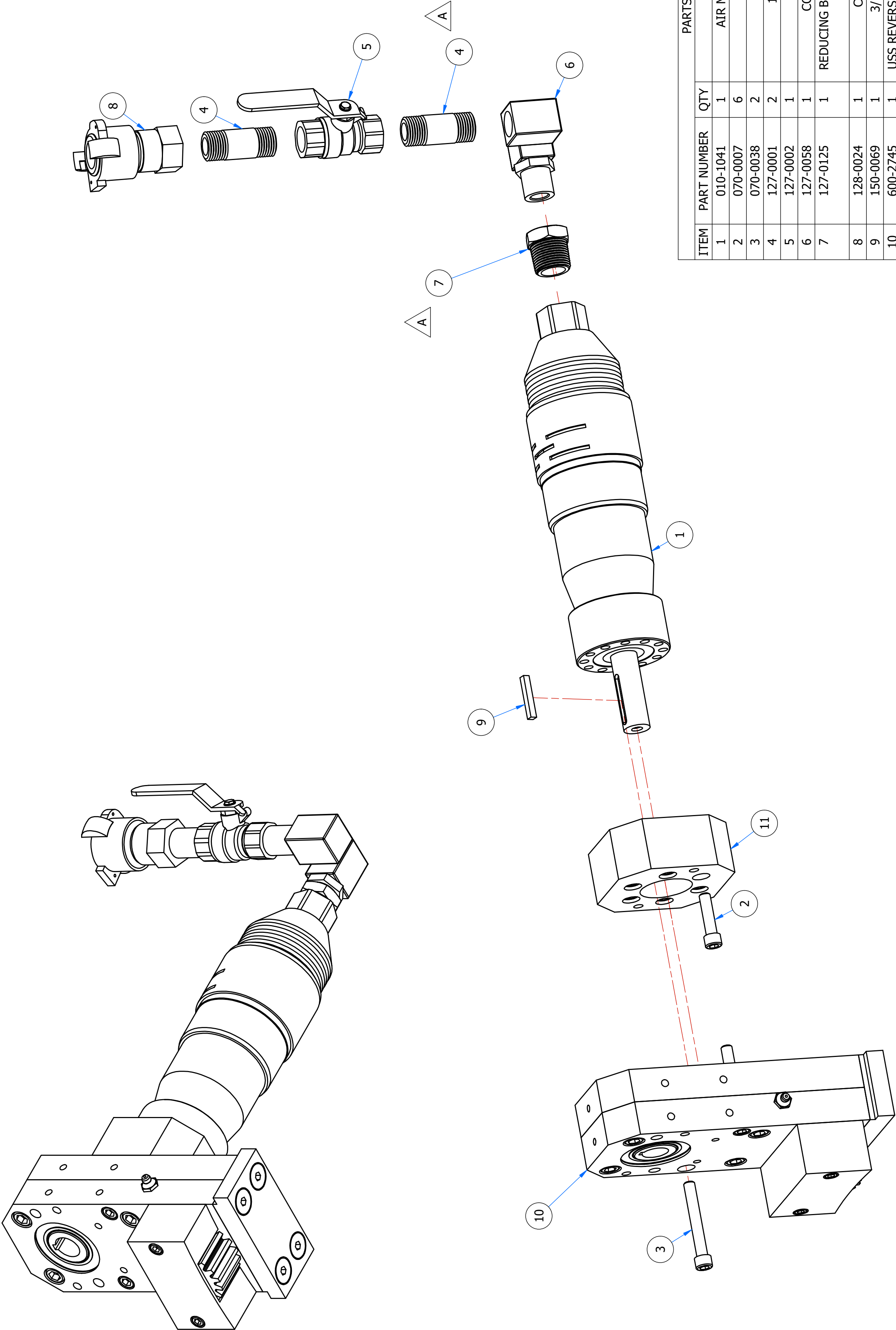


PARTS LIST			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	600-4206 D	1	USS REVERSIBLE AIR DRIVE ASSEMBLY - 1700W, 104 RPM
2	600-0632B	1	AIR CADDY ASSEMBLY

USS REV. AIR DRIVE PACKAGE **- 1700 W, 104 RPM** 605-4206D



REVISIONS			
REV	ECO	DESCRIPTION	DATE
A	#746	REMOVED 127-0107. ADDED 127-0125, 1 127-0001	4/18/22
			APPROVED
			CDM

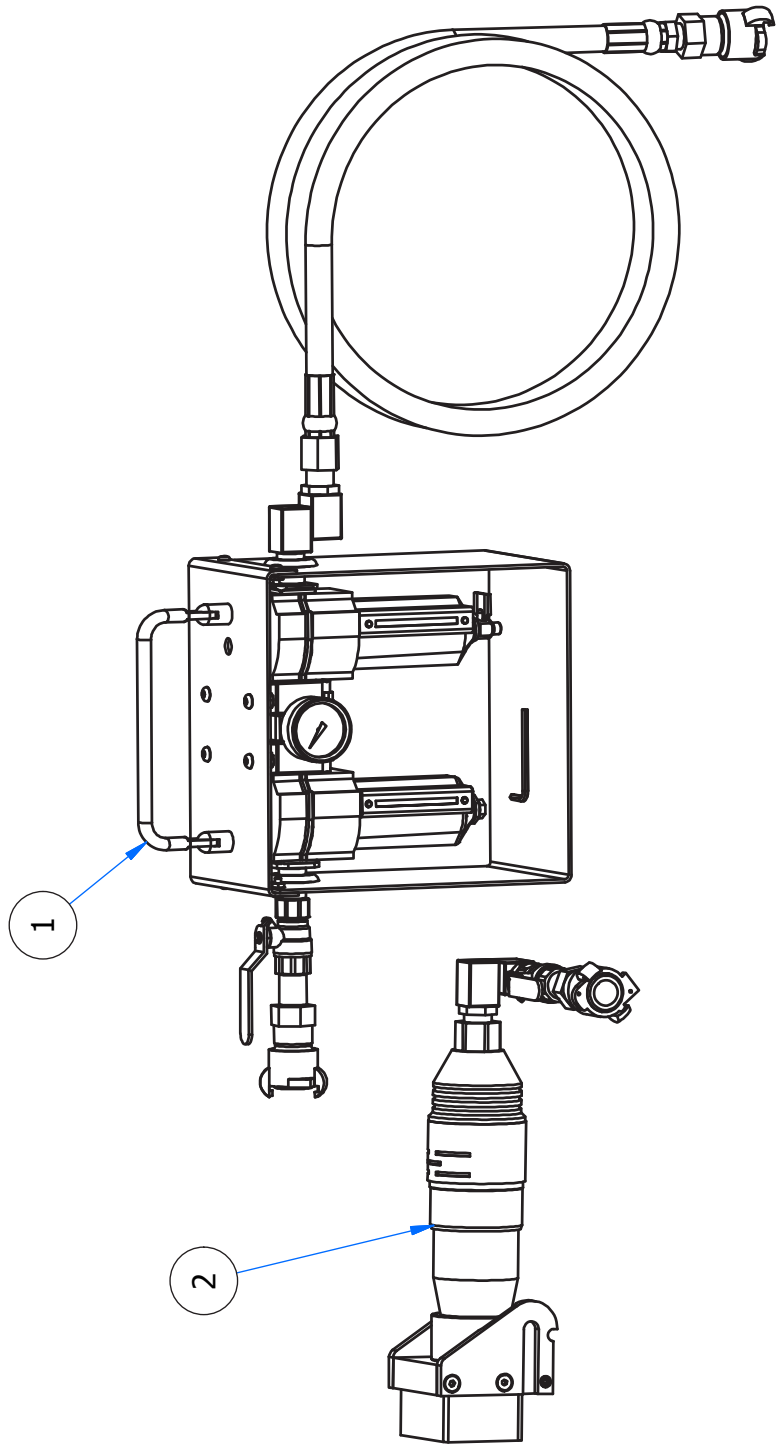


PARTS LIST		
ITEM	PART NUMBER	QTY
1	010-1041	1
2	070-0007	6
3	070-0038	2
4	127-0001	2
5	127-0002	1
6	127-0058	1
7	127-0125	1
8	128-0024	1
9	150-0069	1
10	600-2745	1
11	620-5313	1
DESCRIPTION		
AIR MOTOR 1700 W, 89 RPM, 3/4" SHAFT		
SHCS, 5/16-18 x 1-1/4		
SHCS, 5/16-18 x 2-1/4		
1/2" NPT X 2" LONG PIPE NIPPLE		
BALL VALVE - 1/2"		
COUPLING - DOUBLE SWIVEL - 1/2"		
REDUCING BUSHING - 3/4 NPTM - 1/2-NPTF ZINC STEEL 5,000#		
COUPLING - EARLOCK - 1/2" NPTF		
3/16 X 1-1/4 SQUARE MACHINE KEY		
USS REVERSIBLE GEAR BOX ASSEMBLY - 3/4" DIA INPUT		
3800 MOTOR MOUNT - REV DRIVE, LC/USS CLAMSHELLS		

TOLERANCES		MATERIAL	
UNLESS OTHERWISE NOTED		CALCULATED MASS	
DECIMALS: .XXX ± .003		N/A	
FRACTIONS: ± 1/16		DESCRIPTION	
ANGULAR: ± 1°		USS REVERSIBLE AIR DRIVE	
REMOVE ALL BURRS AND SHARP EDGES		ASSEMBLY - 1700W, 104 RPM	
DRAWN		PART NUMBER	
wdemaster		600-4206 D	
DESIGNED		SCALE	
wdemaster		1/2	
THIRD ANGLE PROJECTION		SIZE	
4/24/2013		C	
FILENAME		SHEET	
C:\Vault\Inv Final Drawings\600-4499\600-4206 D.dwg		1 OF 1	

USS IN-LINE AIR DRIVE PACKAGE **- 1700 W, 89 RPM** 605-4221D

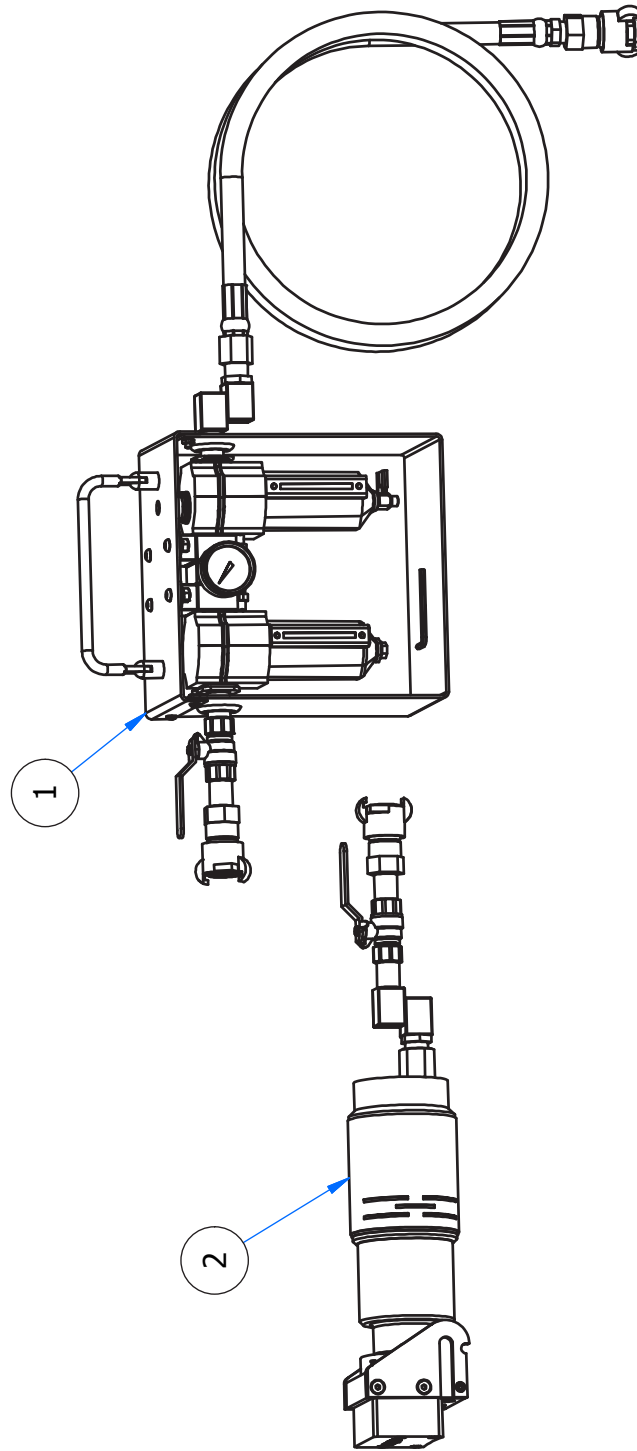
PARTS LIST			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	600-0632B	1	AIR CADDY ASSEMBLY
2	600-4221 D	1	USS IN-LINE AIR DRIVE ASSEMBLY - 1700W, 89 RPM



USS IB LINE AIR DRIVE PACKAGE **- 3000 W, 95 RPM**

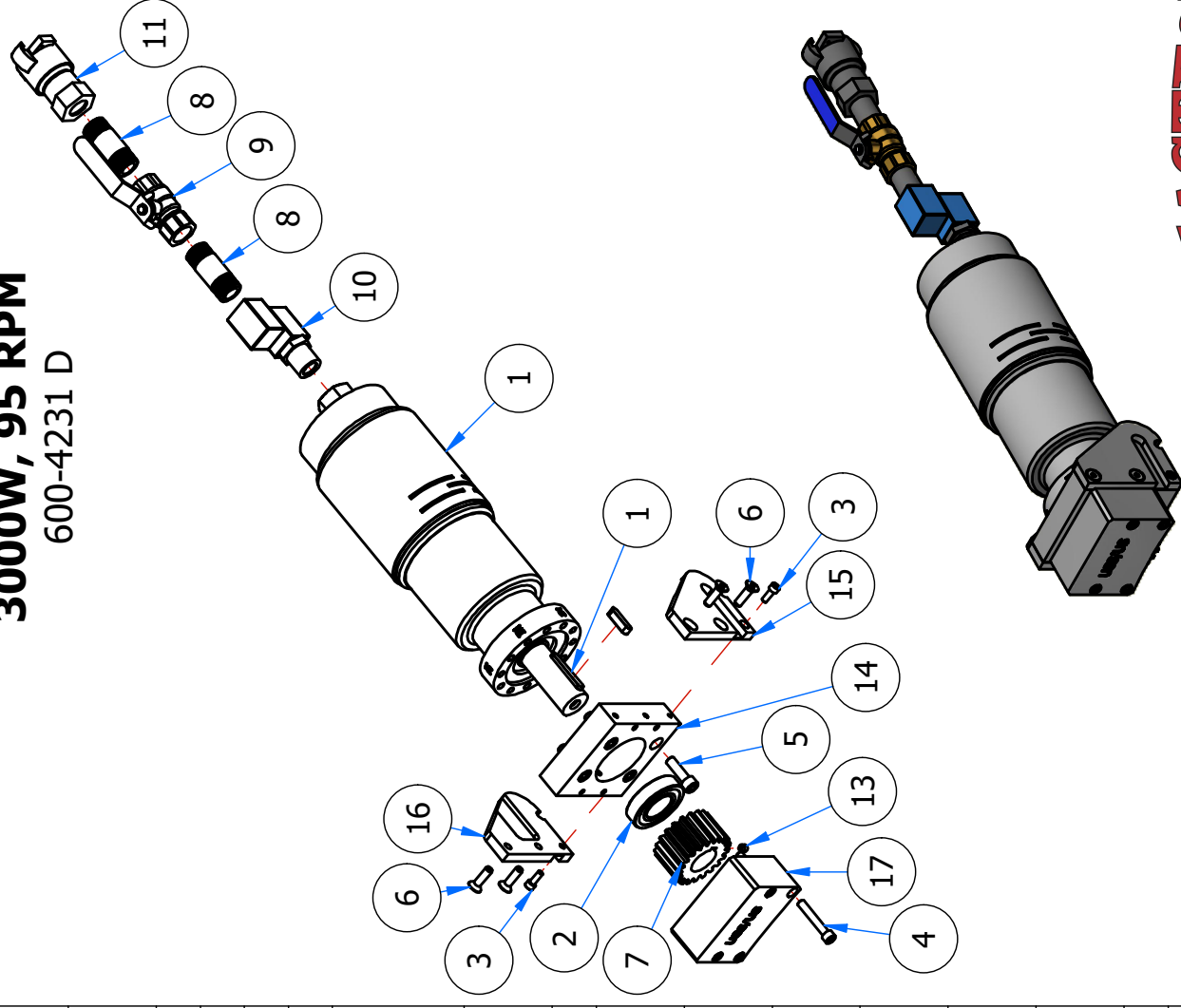
605-4231D

PARTS LIST			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	600-0632B	1	AIR CADDY ASSEMBLY
2	600-4231 D	1	USS IN-LINE AIR DRIVE ASSEMBLY - 3000W, 95 RPM



9/26/2017, REV

USS IN-LINE AIR DRIVE ASSEMBLY - **3000W, 95 RPM** 600-4231 D



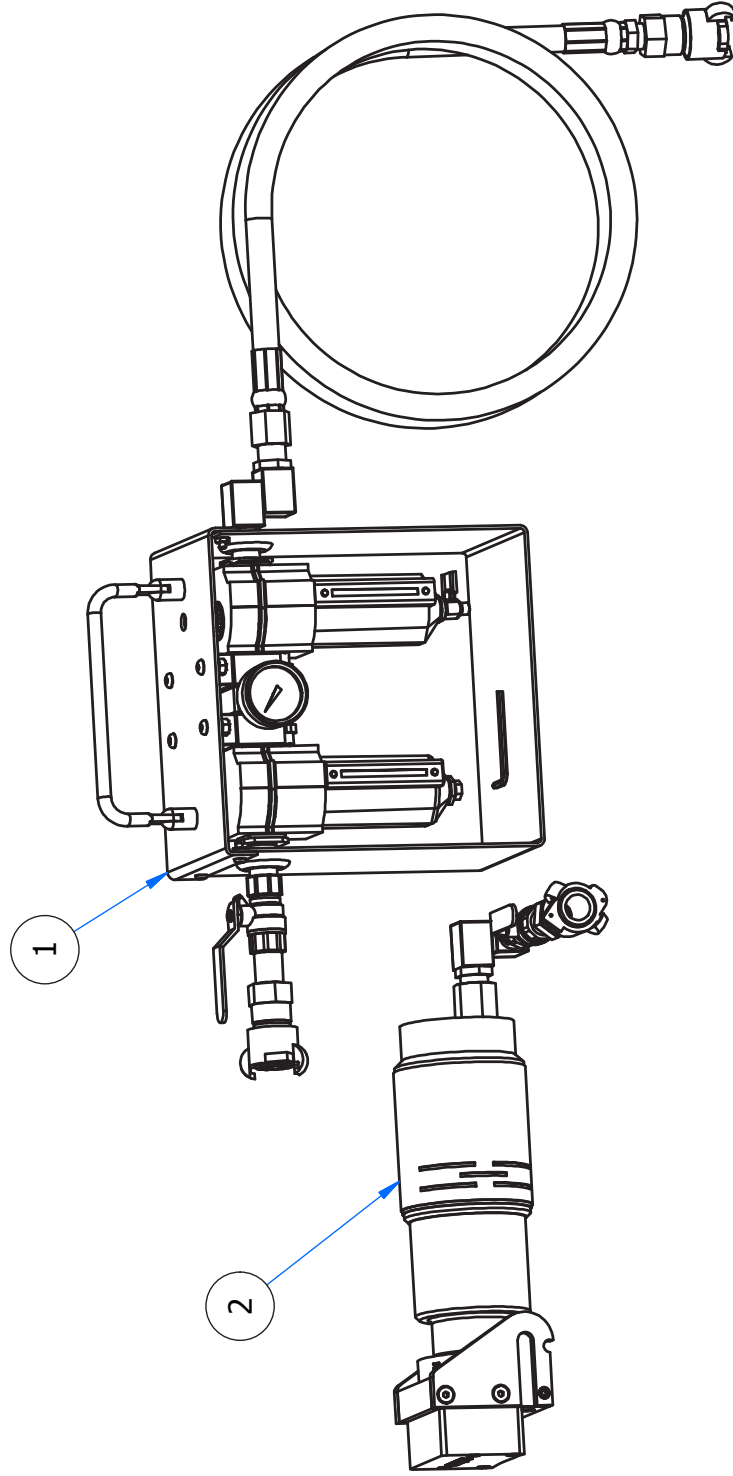
MACTECH

PARTS LIST			
ITE	PART NUMBE	QTY	DESCRIPTION
1	010-1040	1	AIR MOTOR 3000 W, 95 RPM, 1" SHAFT
2	020-0083	1	RADIAL BALL BEARING - 1 X 2 X 1/2, SEALED
3	070-0002	2	SHCS, #10-24 x 1/2
4	070-0005	4	SHCS, 1/4-20 x 1-1/2
5	070-0006	4	SHCS, 5/16-18 x 1
6	071-0012	4	FHCS, 1/4-20 x 7/8
7	100-0089	1	SPUR GEAR - 10DP 20° 20T 1" BORE W/KWY, .03 L HUB
8	127-0001	2	1/2" NPT X 2" LONG PIPE NIPPLE
9	127-0002	1	BALL VALVE - 1/2"
10	127-0058	1	COUPLING - DOUBLE SWIVEL - 1/2"
11	128-0024	1	COUPLING - EARLOCK - 1/2" NPTF
13	340-0006	1	SSS, CUP POINT - 1/4-20 UNC x 1/4
14	620-5702	1	4800 DRIVE FACE PLATE - USS/US
15	620-5710	1	RH DRIVE SIDE PLATE - 2"
16	620-5711	1	LH DRIVE SIDE PLATE - 2"
17	620-5718	1	USS/US GEAR COVER
12	150-0025	1	UNDERSIZE MACHINE KEY - 1/4 SQ X 1 RND
			ENDS

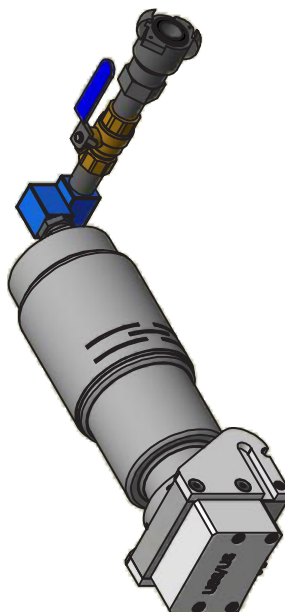
PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION
1	600-0632B	1	AIR CADDY ASSEMBLY
2	600-4231 E	1	USS IN-LINE AIR DRIVE ASSEMBLY - 3000 W, 286 RPM

USS IN-LINE AIR DRIVE PACKAGE - 3000W, 286 RPM 605-4231E



USS IN-LINE AIR DRIVE



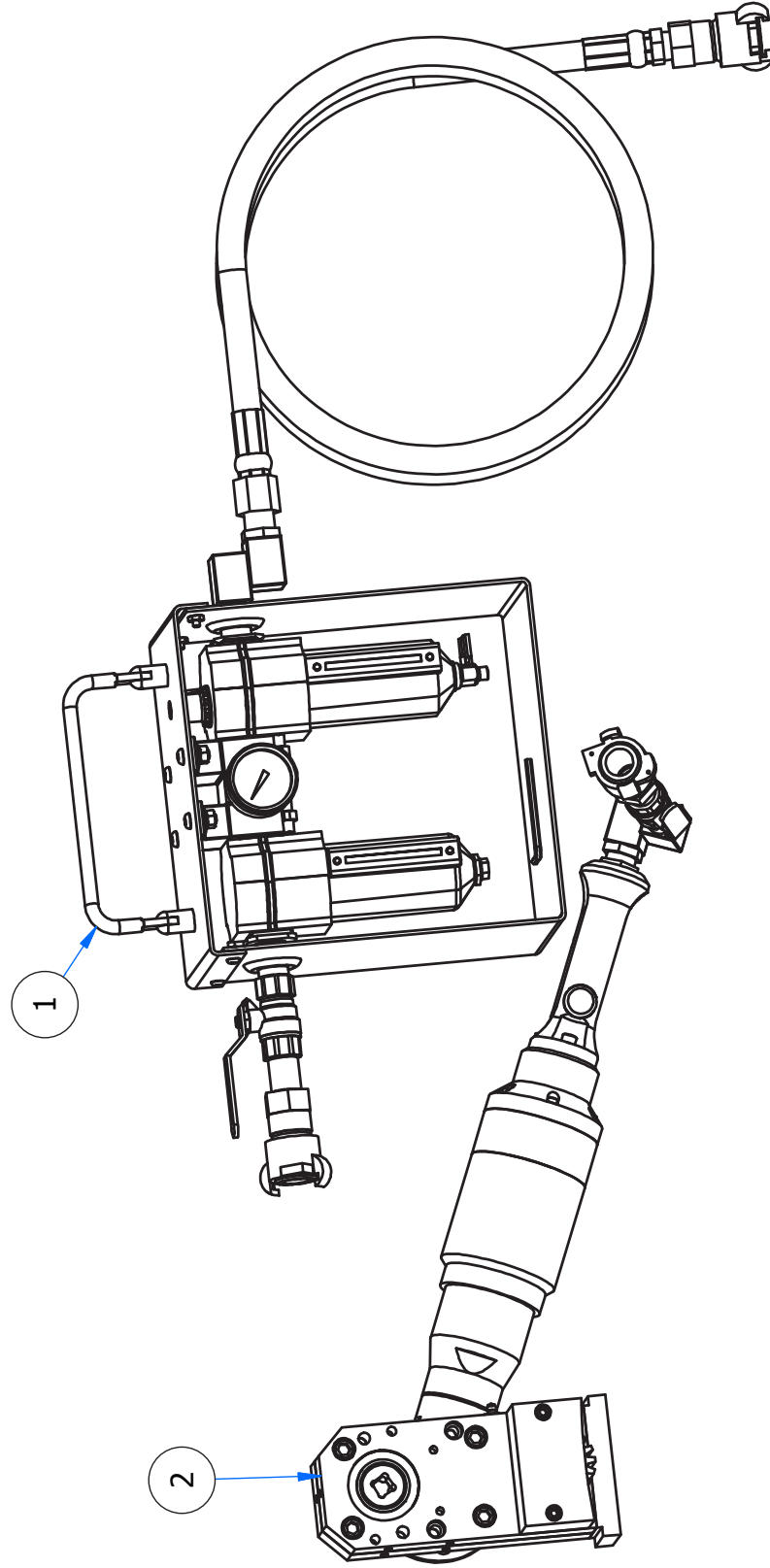
PARTS LIST			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	010-1047	1	AIR MOTOR 3000 W, 286 RPM, 1" SHAFT
2	020-0083	1	RADIAL BALL BEARING - 1 X 2 X 1/2, SEALED
3	070-0002	2	SHCS, #10-24 x 1/2
4	070-0005	4	SHCS, 1/4-20 x 1-1/2
5	070-0006	4	SHCS, 5/16-18 x 1
6	071-0012	4	FHCS, 1/4-20 x 7/8
7	100-0089	1	SPUR GEAR - 10DP 20° 20T 1" BORE W/KWY, .03 L HUB
8	127-0001	2	1/2" NPT X 2" LONG PIPE NIPPLE
9	127-0002	1	BALL VALVE - 1/2"
10	127-0058	1	COUPLING - DOUBLE SWIVLE - 1/2"
11	128-0024	1	COUPLING - EARLOCK - 1/2" NPTF
12	340-0006	1	SSS, CUP POINT - 1/4-20 UNC x 1/4"
13	620-5702	1	4800 DRIVE FACE PLATE - USS/US
14	620-5710	1	RH DRIVE SIDE PLATE - 2"
15	620-5711	1	LH DRIVE SIDE PLATE - 2"
16	620-5718	1	USS/US GEAR COVER

2/17/2017

PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION
1	600-0632B	1	AIR CADDY ASSEMBLY
2	600-4286D	1	USS REV RA AIR DRIVE ASSEMBLY - 2200W, 89 RPM

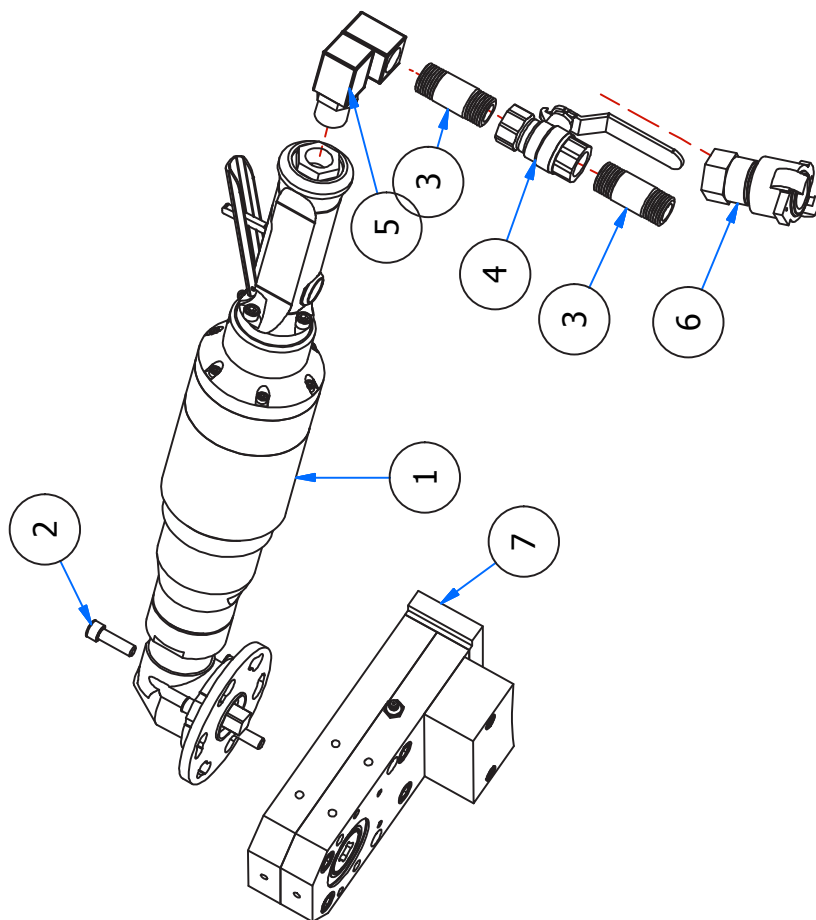
USS REV RA AIR DRIVE PACKAGE - 2200 W, 89 RPM 605-4286D



USS REVERSIBLE RIGHT ANGLE AIR DRIVE ASSEMBLY - 2200W, 89 RPM

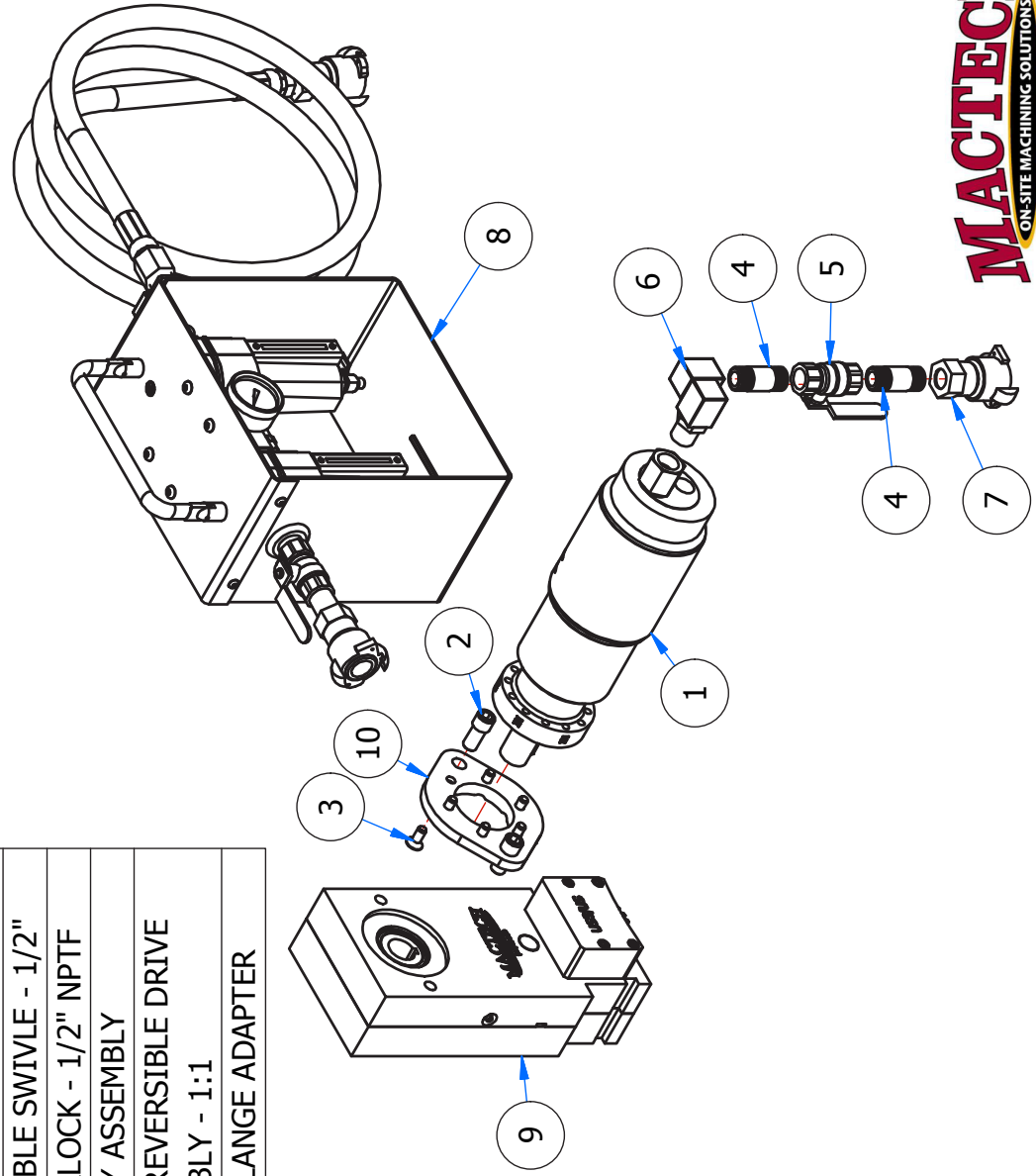
600-4286D

ITEM	PART NUMBER	QTY	DESCRIPTION
1	010-1037	1	RA NUTRUNNER - 2200W, 80RPM, 1/2" SQ OUT, REVERSIBLE
2	070-0006	2	SHCS, 5/16-18 x 1
3	127-0001	2	1/2" NPT X 2" LONG PIPE NIPPLE
4	127-0002	1	BALL VALVE - 1/2"
5	127-0058	1	COUPLING - DOUBLE SWIVLE - 1/2"
6	128-0024	1	COUPLING - EARLOCK - 1/2" NPTF
7	600-4281	1	USS REVERSIBLE GEAR BOX ASSEMBLY - 1/2" SQUARE INPUT

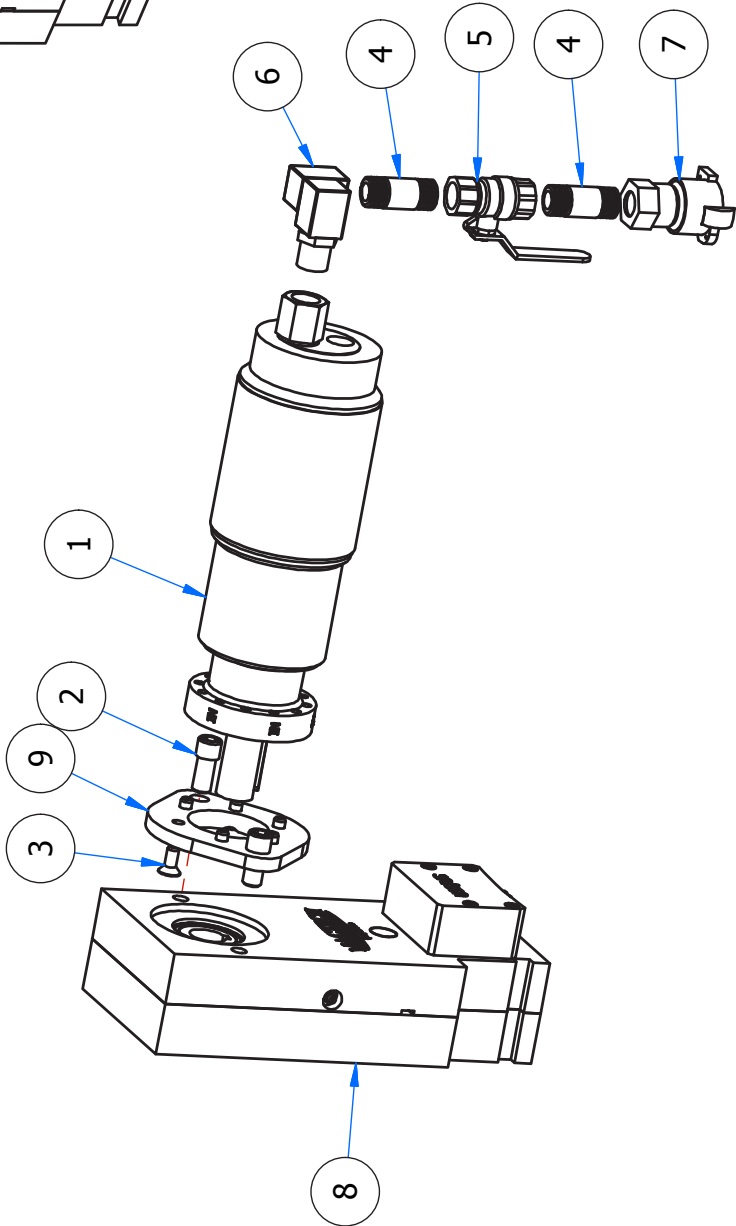
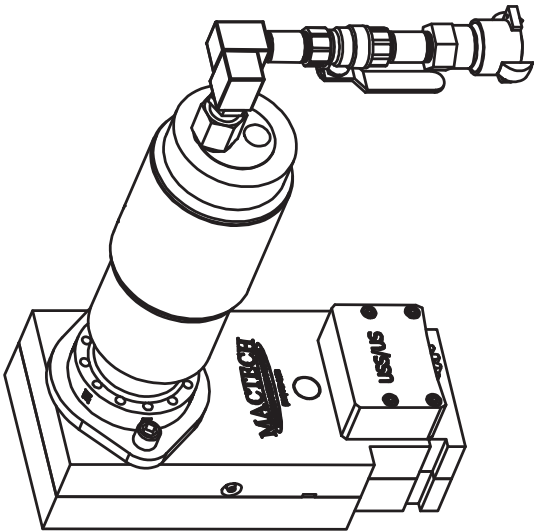


PARTS LIST			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	010-1040	1	AIR MOTOR 3000 W, 95 RPM, 1" SHAFT
2	070-0094	2	SHCS, 1/2-13 x 1 - .650 HEAD DIA
3	071-0017	6	FHCS, 5/16-18 x 3/4
4	127-0001	2	1/2" NPT X 2" LONG PIPE NIPPLE
5	127-0002	1	BALL VALVE - 1/2"
6	127-0058	1	COUPLING - DOUBLE SWIVLE - 1/2"
7	128-0024	1	COUPLING - EARLOCK - 1/2" NPTF
8	600-0632B	1	AIR CADDY ASSEMBLY
9	600-6779	1	USS CLAMSHELL REVERSIBLE DRIVE ASSEMBLY - 1:1
10	620-1054	1	4800 2 BOLT FLANGE ADAPTER

USS CLAMSHELL REVERSIBLE AIR DRIVE PACKAGE 605-6779A



USS REV AIR DRIVE PACKAGE **3000 W, 95 RPM** 600-6779A

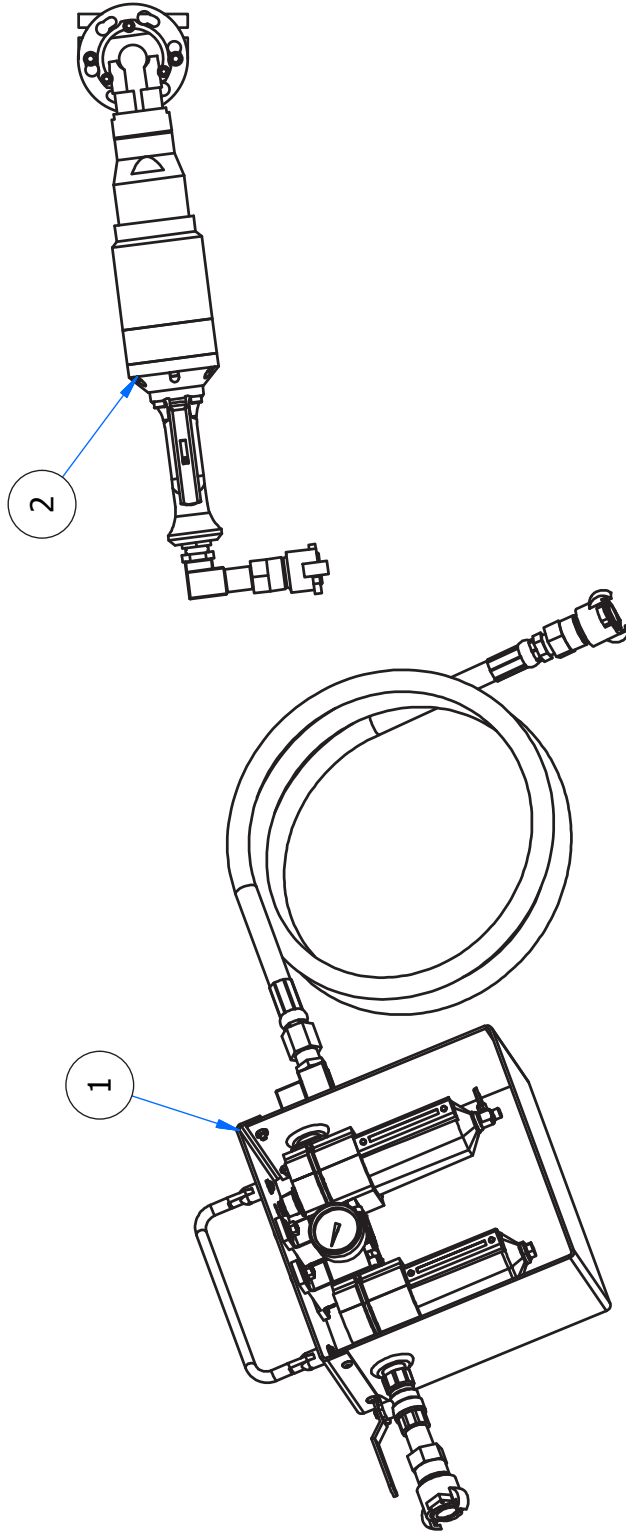


PARTS LIST			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	010-1040	1	AIR MOTOR 3000 W, 95 RPM, 1" SHAFT
2	070-0094	2	SHCS, 1/2-13 x 1 - .650 HEAD DIA
3	071-0017	6	FHCS, 5/16-18 x 3/4
4	127-0001	2	1/2" NPT X 2" LONG PIPE NIPPLE
5	127-0002	1	BALL VALVE - 1/2"
6	127-0058	1	COUPLING - DOUBLE SWIVLE - 1/2"
7	128-0024	1	COUPLING - EARLOCK - 1/2" NPTF
8	600-6779	1	USS CLAMSHELL REVERSIBLE DRIVE
ASSEMBLY - 1:1			
9	620-1054	1	4800 2 BOLT FLANGE ADAPTER

PARTS LIST

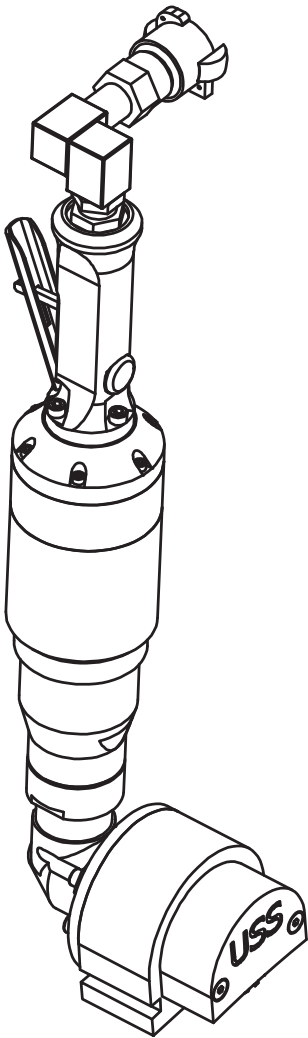
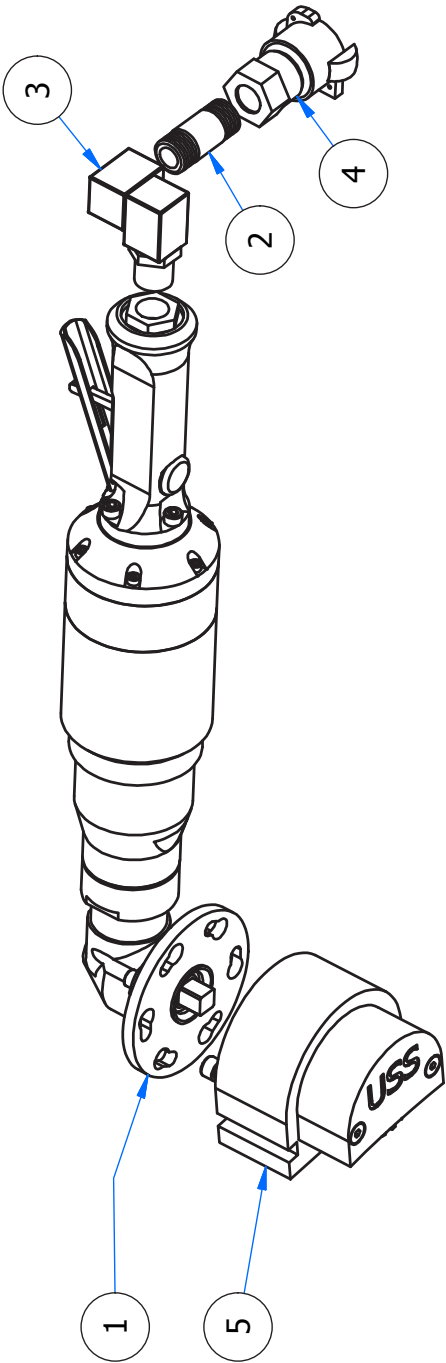
ITEM	PART NUMBER	QTY	DESCRIPTION
1	600-0632B	1	AIR CADDY ASSEMBLY
2	600-6831	1	USS RIGHT ANGLE DRIVE ASSEMBLY - 2200W, 111 RPM

USS RIGHT ANGLE DRIVE ASSY PACKAGE - 2200W, 111 RPM 605-6831



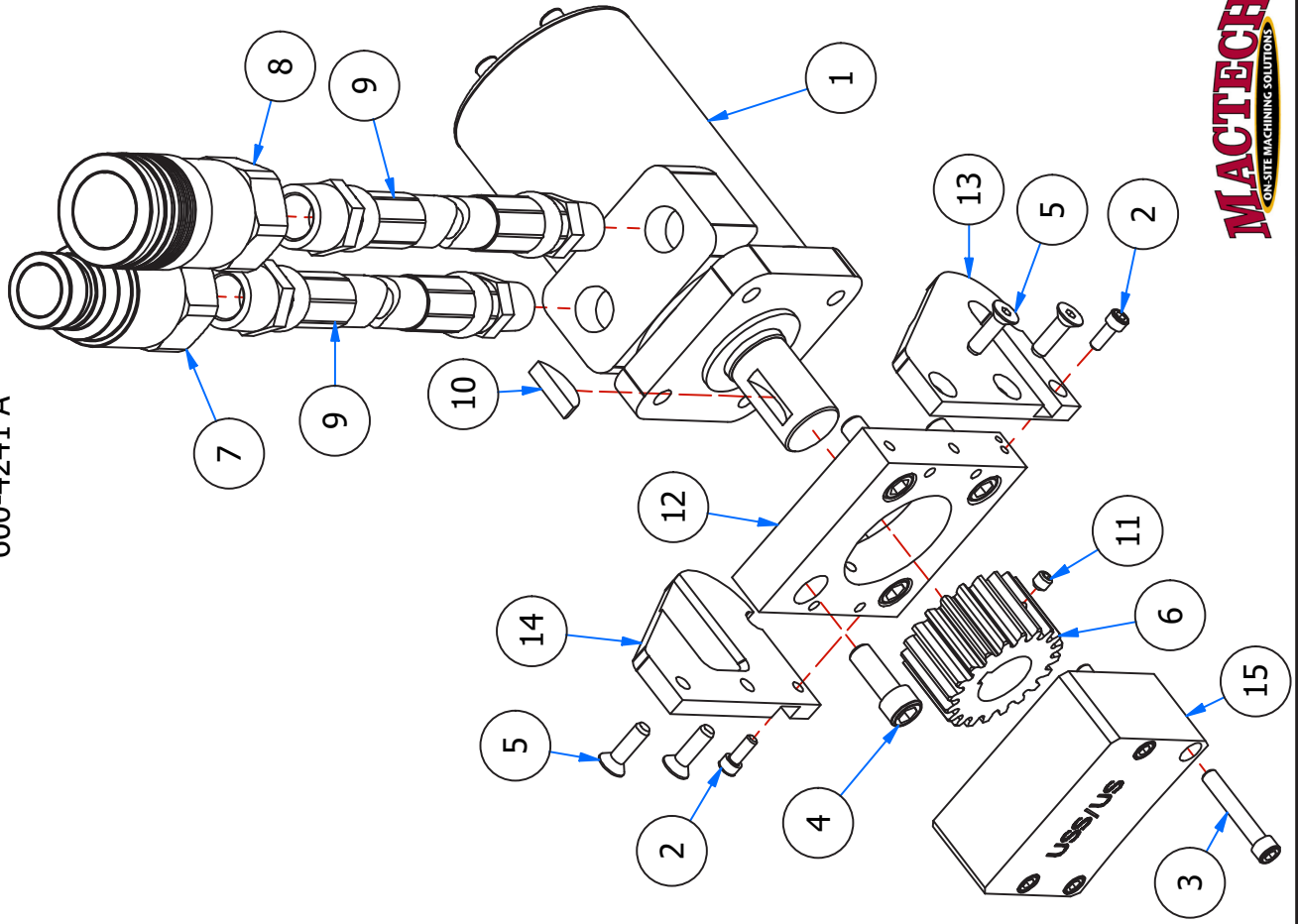
USS RIGHT ANGLE DRIVE ASSEMBLY **- 2200W, 1111 RPM** 600-6831

PARTS LIST			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	010-1036	1	RA NUTRUNNER, 2200W, 1111 RPM, 1/2" SQ SHAFT
2	127-0001	1	1/2" NPT X 2" LONG PIPE NIPPLE
3	127-0058	1	COUPLING - DOUBLE SWIVEL - 1/2"
4	128-0024	1	COUPLING - EARLOCK - 1/2" NPTF
5	600-6830	1	USS RA DRIVE - 1/2" SQ INPUT HOUSING ASSY



USS IN-LINE HYD DRIVE ASSEMBLY - 9.7 CI, 185 RPM

600-4241 A



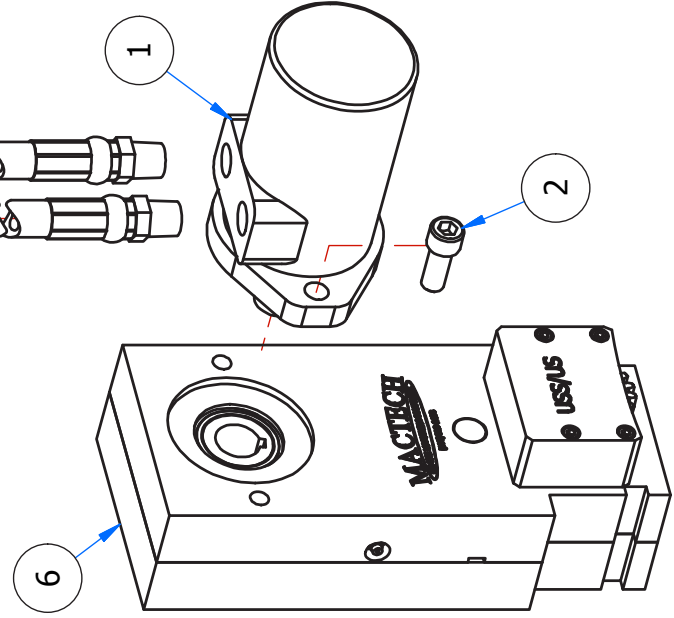
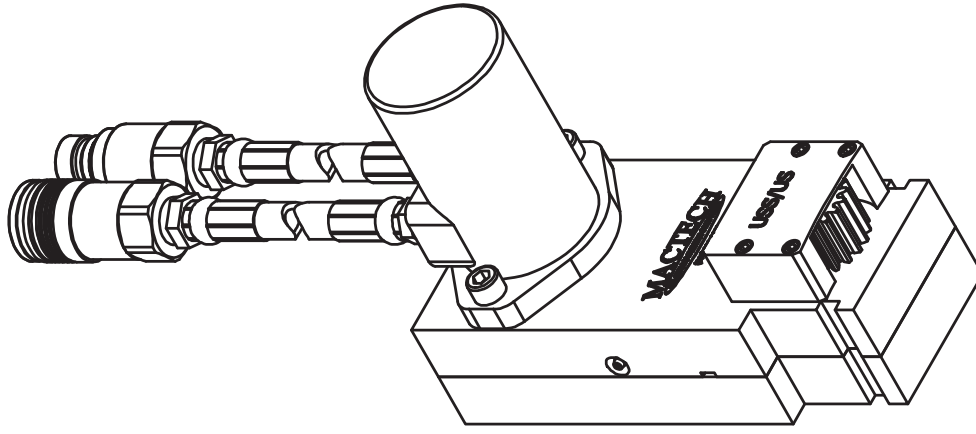
MACTECH
ON-SITE MACHINING SOLUTIONS

PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION
1	011-1000	1	HYD MOTOR - 09.7 CI, 185 RPM, 1" SHAFT, 4 BOLT, NPT, H SERIES
2	070-0002	2	SHCS, #10-24 x 1/2
3	070-0005	4	SHCS, 1/4-20 x 1-1/2
4	070-0014	4	SHCS, 3/8-16 x 1
5	071-0012	4	FHCS, 1/4-20 x 7/8
6	100-0089	1	SPUR GEAR - 10DP 20° 20T 1" BORE W/KWY, .03 L HUB
7	128-0091	1	HYD COUPLING, FLUSHFACE, MALE 3/4 NOM X 3/4" F NPT
8	128-0092	1	HYD COUPLING, FLUSHFACE, FEMALE 3/4 NOM X 3/4" F NPT
9	128-0101	2	HYDRAULIC HOSE - 1/2 X 36" - 1/2" NPTM & 3/4" NPTM
10	150-0013	1	WOODRUF KEY - #808
11	340-0006	1	SSS, CUP POINT - 1/4-20 UNC x 1/4
12	620-5704	1	HYDRAULIC DRIVE FACE PLATE
13	620-5710	1	RH DRIVE SIDE PLATE - 2"
14	620-5711	1	LH DRIVE SIDE PLATE - 2"
15	620-5718	1	USS/US GEAR COVER

PARTS LIST		
ITEM	PART NUMBER	QTY DESCRIPTION
1	011-1001	1 HYD MOTOR - 9.7 CI, 185 RPM, 1" DIA SHAFT, 2 BOLT FLANGE
2	070-0035	2 SHCS, 1/2-13 x 1-1/4
3	128-0091	1 HYD COUPLING, FLUSHFACE, MALE 3/4 NOM X 3/4" F NPT
4	128-0092	1 HYD COUPLING, FLUSHFACE, FEMALE 3/4 NOM X 3/4" F NPT
5	128-0101	2 HYDRAULIC HOSE - 1/2 X 36" - 1/2" NPTM & 3/4" NPTM
6	600-6779	1 USS CLAMSHELL REVERSIBLE DRIVE ASSEMBLY - 1:1

USS CLAMSHELL REV HYD DRIVE - 9.7 CI, 185 RPM 600-6779H

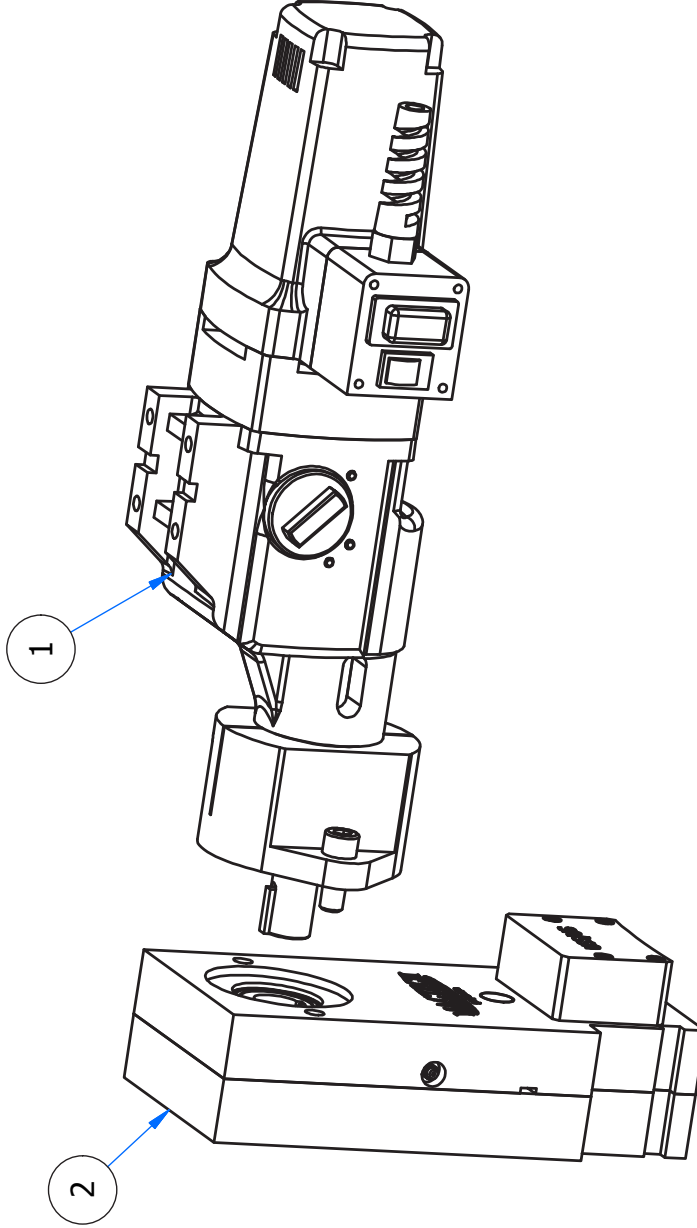


MACTECH
ON-SITE MACHINING SOLUTIONS

6/6/2017, REV 1

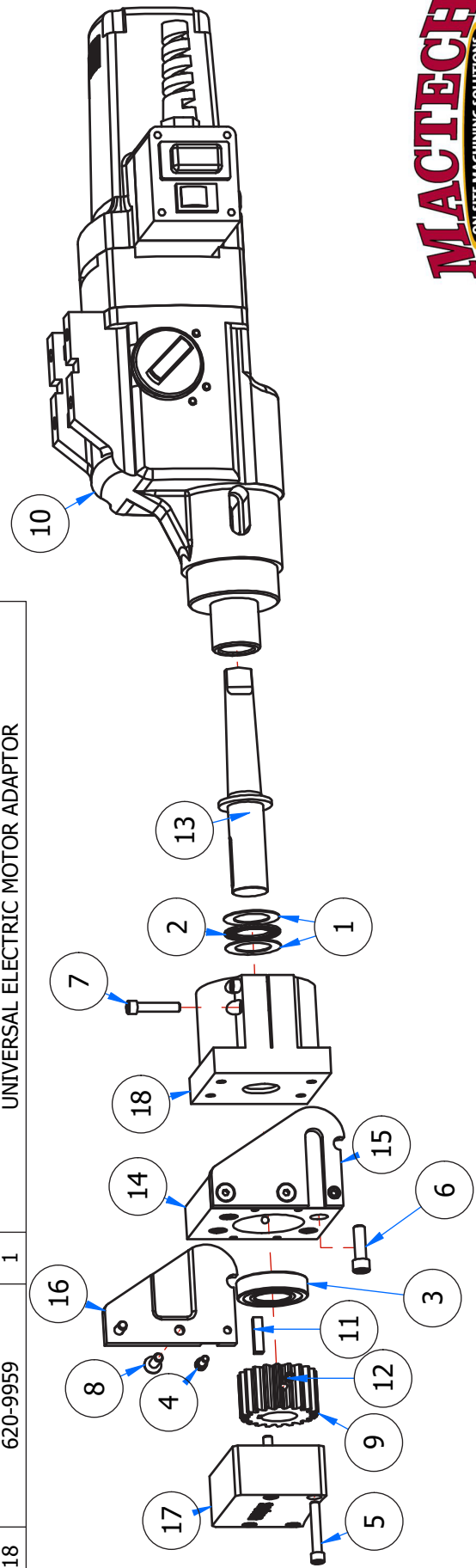
PARTS LIST			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	600-6657	1	ELECTRIC DRIVE ASSY 2200 W, 80-570 RPM, 110 VAC
2	600-6779	1	USS CLAMSHELL REVERSIBLE DRIVE ASSEMBLY - 1:1

USS REV ELECTRIC DRIVE
- 2200 W, 93-665 RPM,
110 VAC
600-6779E



**USS IN-LINE ELECTRIC DRIVE
ASSEMBLY 2200W, 110V
600-6782**

PARTS LIST			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	020-0033 031 WASHER	2	NEEDLE ROLLER BEARING RACE - 1 X 1-9/16 X 1/32T
2	020-0033 BEARING	1	NEEDLE THRUST BEARING - 1 X 1-9/16
3	020-0083	1	RADIAL BALL BEARING - 1 X 2 X 1/2, SEALED
4	070-0002	2	SHCS, #10-24 x 1/2
5	070-0005	4	SHCS, 1/4-20 x 1-1/2
6	070-0006	4	SHCS, 5/16-18 x 1
7	070-0009	4	SHCS, 1/4-20 x 1-1/4
8	071-0012	4	FHCS, 1/4-20 x 7/8
9	100-0089	1	SPUR GEAR - 10DP 20° 20T 1" BORE W/KWY, .03 L HUB
10	130-0386	1	ELECTRIC MOTOR 2200W 0-570 RPM VARIABLE, 4 SPEED, REVERSIBLE, 110V
11	150-0061	2	MACHINE KEY - 1/4 SQ X 1 SQ ENDS
12	340-0006	1	SSS, CUP POINT - 1/4-20 UNC x 1/4
13	445-1062	1	#3 MORSE TAPER MALE TO 1" x 2-1/2" L - MALE RETAINED ADAPTOR
14	620-5702	1	4800 DRIVE FACE PLATE - USS/US
15	620-5710	1	RH DRIVE SIDE PLATE - 2"
16	620-5711	1	LH DRIVE SIDE PLATE - 2"
17	620-5718	1	USS/US GEAR COVER
18	620-9959	1	UNIVERSAL ELECTRIC MOTOR ADAPTOR

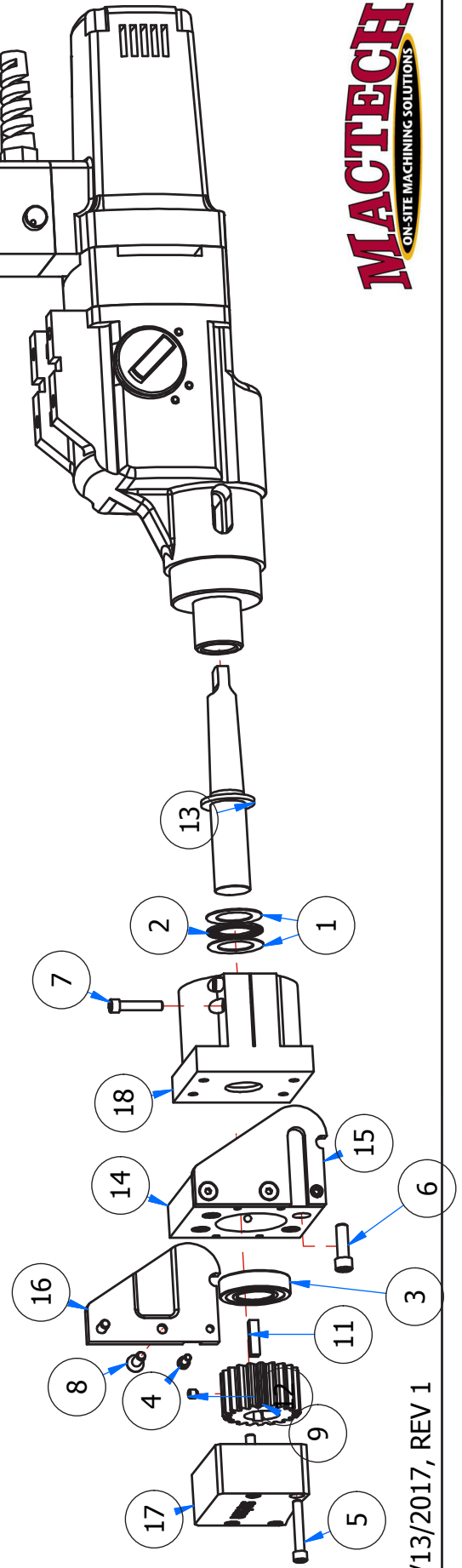


1/23/2019, REV 1

USS IN-LINE ELECTRIC DRIVE ASSEMBLY 2200W, 220V 600-6801

PARTS LIST

ITEM	PART NUMBER	QTY	DESCRIPTION
1	.020-0033 031 WASHER	2	NEEDLE ROLLER BEARING RACE - 1 X 1-9/16 X 1/32T
2	020-0033 BEARING	1	NEEDLE THRUST BEARING - 1 X 1-9/16
3	020-0083	1	RADIAL BALL BEARING - 1 X 2 X 1/2, SEALED
4	070-0002	2	SHCS, #10-24 x 1/2
5	070-0005	4	SHCS, 1/4-20 x 1-1/2
6	070-0006	4	SHCS, 5/16-18 x 1
7	070-0009	4	SHCS, 1/4-20 x 1-1/4
8	071-0012	4	FHCS, 1/4-20 x 7/8
9	100-0089	1	SPUR GEAR - 10DP 20° 20T 1" BORE W/KWY, .03 L HUB
10	130-0482	1	ELECTRIC MOTOR 2200W 80-570 RPM, VARIABLE SPEED, 220V
11	150-0061	2	MACHINE KEY - 1/4 SQ X 1 SQ ENDS
12	340-0006	1	SSS, CUP POINT - 1/4-20 UNC x 1/4"
13	445-1062	1	#3 MORSE TAPER MALE TO 1" x 2-1/2" L - MALE RETAINED ADAPTOR
14	620-5702	1	4800 DRIVE FACE PLATE - USS/US
15	620-5710	1	RH DRIVE SIDE PLATE - 2"
16	620-5711	1	LH DRIVE SIDE PLATE - 2"
17	620-5718	1	USS/US GEAR COVER
18	620-9959	1	UNIVERSAL ELECTRIC MOTOR ADAPTOR

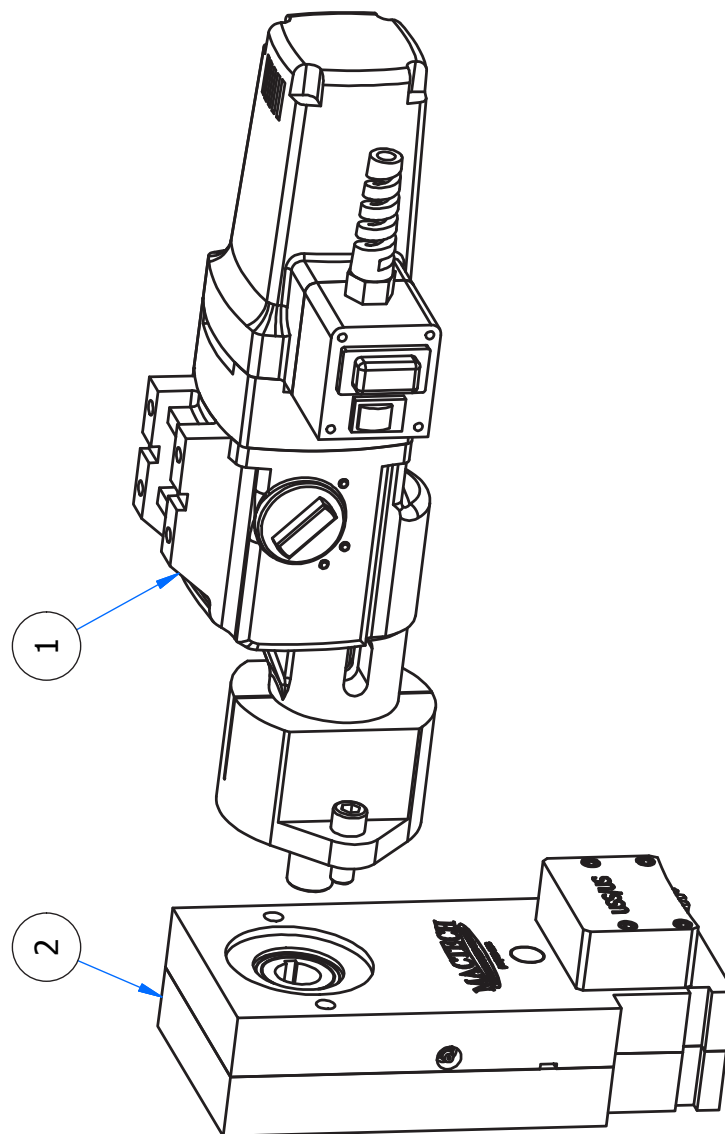


MACTECH
ON-SITE MACHINING SOLUTIONS

6/13/2017, REV 1

USS REV ELECTRIC DRIVE - 2200 W, 93-665 RPM, 220 VAC 600-6802

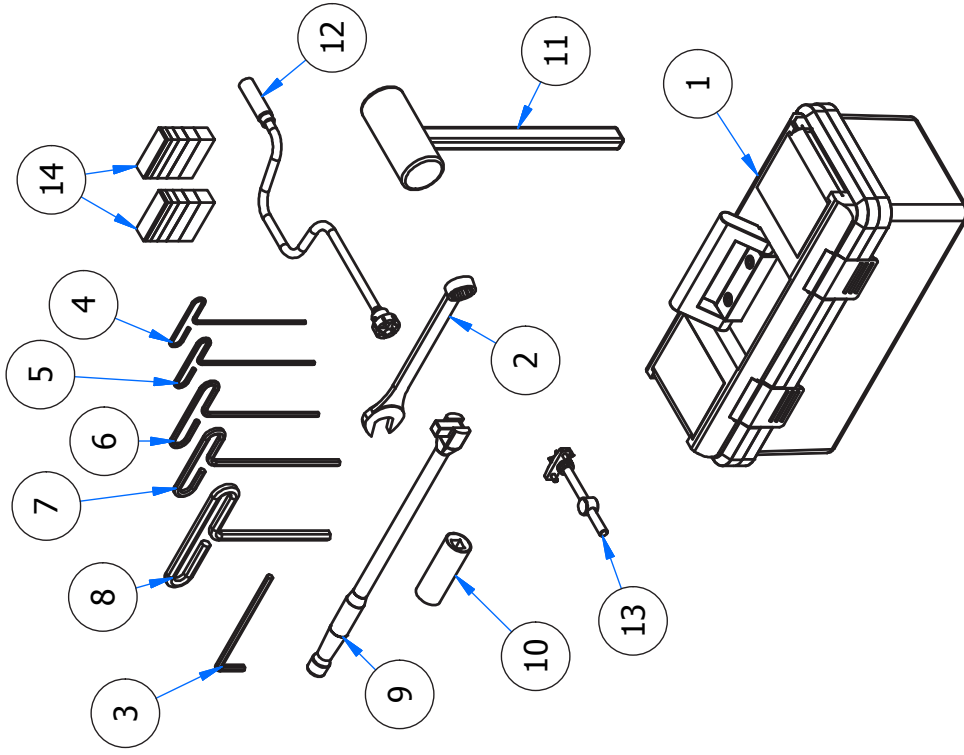
PARTS LIST		
ITEM	PART NUMBER	DESCRIPTION
1	600-6655	ELECTRIC DRIVE ASSY 2200 W, 80-570 RPM, 220 VAC
2	600-6779	USS CLAMSHELL REVERSIBLE DRIVE ASSEMBLY - 1:1



PARTS LIST			
ITEM	PART NUMBER	QTY	DESCRIPTION
1	093-0009	1	TOOL BOX - 16 X 8 X 7-3/8
2	452-0011	1	COMBINATION WRENCH - 7/8"
3	452-0110	1	ALLEN WRENCH LONG ARM - 1/4"
4	452-0153	1	ALLEN WRENCH T-HANDLE - 1/8"
5	452-0155	1	ALLEN WRENCH T-HANDLE - 5/32"
6	452-0156	1	ALLEN WRENCH T-HANDLE - 3/16"
7	452-0158	1	ALLEN WRENCH T-HANDLE - 1/4"
8	452-0160	1	ALLEN WRENCH T-HANDLE - 3/8"
9	452-0420	1	BREAKER BAR 1/2" DRIVE - 15-3/4 OAL
10	452-0436	1	SOCKET DEEP WELL 1/2" DRIVE - 7-8"
11	452-0602	1	HAMMER DEAD BLOW - #2
12	452-0820	1	7 PT SOCKET W/ SPEED WRENCH ASSY
13	460-0037	1	#3-#4 3/8-40 RH US FEED SCREW ASSEMBLY - 7 PT (.004 PER TRIP)
14	600-0349	2	US 3/4 TOOL BLOCK SHIM SET

USS HAND TOOL KIT

601-USS



MACTECH
ON-SITE MACHINING SOLUTIONS

1/5/2017, REV 1